

# SOUTHWESTERN TECHNICAL INSTITUTE

|  
AN  
OPEN  
DOOR



Catalog 1971-73



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# **SOUTHWESTERN TECHNICAL INSTITUTE**

SYLVA, NORTH CAROLINA 28779

**Catalog 1971-72  
1972-73**

AN INSTITUTION

OF

THE NORTH CAROLINA DEPARTMENT OF COMMUNITY COLLEGES

## TABLE OF CONTENTS

SCHOOL CALENDAR.....	6
STATE BOARD OF EDUCATION.....	7
BOARD OF TRUSTEES.....	7
CURRICULUM ADVISORY COMMITTEES.....	8
ADMINISTRATION.....	9
FACULTY.....	10
PHILOSOPHY.....	11
PURPOSE.....	12
OBJECTIVES.....	12

### GENERAL INFORMATION

Accreditation.....	13
History, Location.....	13
Learning Resource Center.....	13
Admission Requirements and Procedures.....	14, 15
Student Services.....	16
Student Financial Aid Programs.....	16, 17, 18, 19
Fees and Tuition.....	19
Curricula, Degrees, Diplomas and Certificates.....	21
Grading System.....	21
Quality Points and Honor Roll.....	22
Attendance Requirements.....	22
Graduation Requirements.....	22
Student Conduct.....	23
Student Lounges.....	23
Change in Schedule.....	23
Withdrawal Policy.....	23
Student Government.....	23

## CURRICULUMS

### DEPARTMENT OF COMMERCIAL SPECIALTIES

Business.....	
Accounting.....	24
Business Administration.....	29
Secretarial Science.....	33
Commercial Art and Advertising Design.....	39

### DEPARTMENT OF GENERAL EDUCATION

Associate Degree in General Education.....	41
Developmental Studies.....	44
Special Services.....	45

### DEPARTMENT OF HUMAN SERVICES

Child Care Worker.....	47
Cosmetology.....	49
Early Childhood Specialist.....	49
Environmental Technology.....	54
Practical Nurse Education.....	58
Recreation Technology.....	60

### DEPARTMENT OF INDUSTRIAL-VOCATIONAL SKILLS

Auto Body Repair.....	65
Automotive Mechanics.....	67
Carpentry.....	70
Electronic Servicing.....	71
General Masonry.....	75
Plumbing and Pipefitting.....	76
Surveying.....	82

## ADULT EDUCATION AND COMMUNITY SERVICES

General Information.....	83
Occupational Extension.....	84
Training for New and Expanding Industries.....	85
General Adult Extension.....	85
Learning Laboratory.....	86



## CURRICULUMS

### DEPARTMENT OF COMMERCIAL SPECIALTIES

- Business
  - Accounting
  - Business Administration
  - Secretarial Science
- Commercial Art and Advertising Design

### DEPARTMENT OF GENERAL EDUCATION

- Associate Degree in General Education
- Developmental Studies
- Special Programs

### DEPARTMENT OF HUMAN SERVICES

- Child Care Worker
- Early Childhood Specialist
- Environmental Technology
- Recreation Technology

### DEPARTMENT OF INDUSTRIAL-VOCATIONAL SKILLS

- Auto Body Repair
- Automotive Mechanics
- Carpentry
- Electronic Servicing
- General Masonry
- Plumbing and Pipefitting
- Surveying

### ADULT EDUCATION AND COMMUNITY SERVICES

- Occupational Extension
- Training for New and Expanding Industries
- General Adult Extension

## SCHOOL CALENDAR

1971-72

### Fall Quarter

Registration.....	Wednesday, September 8
Classes Begin.....	Thursday, September 9
Fall Quarter Ends.....	Wednesday, November 24
Thanksgiving Holidays and Quarter Break.....	Thursday, November 25- Tuesday, November 30

### Winter Quarter

Registration and Classes Begin.....	Wednesday, December 1
Last Day Before Christmas Holidays.....	Friday, December 17
Classes Resume.....	Monday, January 3
Winter Quarter Ends.....	Tuesday, February 29

### Spring Quarter

Registration and Classes Begin.....	Monday, March 13
Easter Holiday.....	Monday, April 3
Spring Quarter Ends.....	Monday, May 29

### Summer Quarter

Registration and Classes Begin.....	Wednesday, June 7
Last Day Before Independence Day Holiday.....	Friday, June 30
Classes Resume.....	Wednesday, July 5
Summer Quarter Ends.....	Thursday, August 24
GRADUATION.....	Thursday, August 24

## SCHOOL CALENDAR

1972-73

### Fall Quarter

Registration.....	Thursday, September 7
Classes Begin.....	Friday, September 8
Fall Quarter Ends.....	Wednesday, November 22

### Winter Quarter

Registration and Classes Begin.....	Monday, December 4
Last Day Before Christmas Holidays.....	Friday, December 22
Classes Resume.....	Wednesday, January 3
Winter Quarter Ends.....	Tuesday, February 27

### Spring Quarter

Registration and Classes Begin.....	Monday, March 12
Last Day Before Easter Holidays.....	Thursday, April 19
Classes Resume.....	Tuesday, April 24
Spring Quarter Ends.....	Tuesday, May 29

### Summer Quarter

Registration and Classes Begin.....	Monday, June 11
Summer Quarter Ends.....	Monday, August 27
GRADUATION.....	Friday, August 24

## STATE BOARD OF EDUCATION

Robert W. Scott.....	Governor
H. P. Taylor.....	Lieutenant Governor
Edwin Gill.....	State Treasurer
Dr. A. Craig Phillips.....	State Supt. of Public Instruction, Secretary
W. Dallas Herring.....	Rose Hill, Chairman
Dr. Ben E. Fountain, Jr.....	Director, Department of Community Colleges
Antony Bevacqua.....	Director of Occupational Education Division

## BOARD OF TRUSTEES

James B. Childress.....	Sylva
W. B. Dillard.....	Sylva
Paul Ellis, Chairman.....	Sylva
Paul Holt, Jr.....	Sylva
Oscar Ledford.....	Franklin
Bruce MacMurray.....	Franklin
Odell Shuler.....	Bryson City
Charles S. Slagle.....	Franklin
Carl Stanford.....	Sylva
George J. Stewart.....	Cashiers
John Wikle.....	Bryson City

# CURRICULUM ADVISORY COMMITTEE

## Automotive Mechanics

Vernon Haskett  
C. C. Mason  
Ray Kinsland  
Roy Rickman  
Don Scott

## Building Trades

E. H. Carson  
W. B. Dillard  
Ed Erwin  
Dan Hooper  
Charles Queen  
Claude Welch

## Business

James Childress  
Bruce MacMurray  
Dr. Eugene Vosecky  
Bill Wilson

## Carpentry

Clyde Andrews  
Ray Clark  
Dan Hooper  
Edwin Ulsenheimer  
Bruce Wike

## Commercial Art and Advertising Design

Nick Andrews  
Jim Wells  
George Becker  
Bob Biddle  
John Parris  
Jimmy Reed  
Representative Charles Taylor

## Cosmetology

Cathy Cook  
Sue Hall  
Johnny Hines  
Ruth Moore  
Eunice Skidmore  
Dorothy Smith

## Fire Service Training

P. R. Bennett  
John Bulgin  
George Crawford, Jr.  
Thomas (Bud) Rogers  
Boyd Sossamon  
James Talley

## Industrial Electronics

Claude Campbell  
Richard Clough  
J. E. Corbin  
Dr. Rodney Leftwich  
Howard Warren

## Law Enforcement

Carl Arvey  
Kenneth Cope  
Tom Gibbs  
Fred Holcombe  
Bill Ledford  
William D. Lewis  
James T. Maxey  
George Moses  
Ernest Wright

## Practical Nurse Education

Roger Bisson  
Ruby Bryson  
Rev. Robert Clegg  
Dr. P. E. Dewees  
Mrs. Verayle Franks  
Mrs. T. A. Fuller  
Mrs. Charles Middleton  
Don Morgan  
Helen A. Poteet  
Dr. Creighton Sossamon  
Mrs. Robert Thutt

## Recreation Technology

Jere Farley  
J. D. Foust  
Jack H. Frauson  
Charles Hensley  
J. W. Jenkins



# ADMINISTRATION

## President

Edward E. Bryson.....	President
B.S., M.A., Western Carolina University	
Betty Arbaugh.....	Secretary

## Instruction

Donald N. Irwin.....	Dean of Instruction (Acting)
B.A., Kings College, New York; Ed.M., University of Delaware	Occupational Education Director
Charles W. Graham, Jr.....	Evening Director (Acting)
B.A., M.A., Western Carolina University	
Grady W. Corbin.....	Director of General Adult Education
B.S., Western Carolina University	
David A. McClure.....	Registrar
B.S., Western Carolina University	
University of Tennessee	
Dorris Beck.....	Learning Resource Center Director
B.S., Graduate Study, Western Carolina University	
Nelda Mills.....	Librarian
B.S., Graduate Study, Western Carolina University	
Kathleen Coggins.....	Secretaray
Audrey Cox.....	Secretary
Judith Ray.....	Secretary-Library Aide
Inez Smith.....	Secretary-Library-Aide

## Student Services

Richard O. Wilson.....	Student Services Director
B.S., M.A., Western Carolina University	
Barbara Hardesty.....	Counselor
B.S., East Tennessee State University	
M.R.E., Duke University Divinity School	
M.A., Western Carolina University	
Eric L. Brady.....	Outreach Coordinator
B.S., Western Carolina University	
Mary P. Barker.....	Mobile Classroom
B.S., Western Carolina University	
Martha L. Robinson.....	Secretary

## Business

John Winfred Ashe.....	Business Manager
B.S., M.A., Western Carolina University	
Peggy Gates.....	Supply and Equipment Coordinator
Joan Johnston.....	Secretary-Cashier
Adais Miller.....	Secretary-Duplicating
Glenda Parker.....	Secretary
Ann Rockette.....	Secretary-Receptionist
Evelyn J. Southard.....	Bookkeeper-Office Supervisor
George Stanley.....	MDTA Coordinator
Frank Cowan.....	Custodian

## Area Consultants

W. Barton Cope.....	Firemanship Coordinator
Claude D. Davis.....	Law Enforcement Coordinator

# FACULTY

Clarence R. Brown.....	Automotive Mechanics General Motors Training Center; Massey Technical Institute; U. S. Army Maintenance School
Madge L. Bryson.....	Cosmetology Asheville Beauty School; State College School of Beauty, Detroit, Michigan; Revlon, Clairol, Lo'real, N. Y., N. Y.; Mitchell's Hairstyling Academy, Raleigh, N. C.
Robert Guy Buchanan.....	Masonry
Sam Buff.....	Industrial-Vocational Skills B.S., Western Carolina University
Bobby Lee Clark.....	Commercial Art B.S., Berea College; Graduate Study, Pratt Institute
Nancy E. Derrick.....	Cosmetology Bladen Technical Institute
Col. Theodore Fuller.....	Surveying B.S., Texas A. & M.
Phyllis Y. Hart.....	Head, Commercial Specialties Department B.S., Graduate Study, Western Carolina University
Lillian Hirt.....	General Education A.B., Western Carolina University
John House.....	Commercial Art B.F.A., Auburn University
Charles Johnson.....	Environmental Technology B.S., North Carolina State University
Roy Kennedy.....	Plumbing Polk Co. Ed. Institute; Palm Beach County Vocational School; Plumbing Trade; Purdue University
James R. Lane.....	Head, Industrial-Vocational Skills Department B.S., Valdosta State College; M.S., University of Southern Mississippi
Mozelle Liner.....	Practical Nurse Education B.S.N. Emory University; N. C. Baptist Hospital
Joy McCollum.....	Business B.A., Graduate Study, Western Carolina University
Carol Martin.....	Business B.A., Catawba College
Ruth W. Nerboso.....	General Education A.B., Tufts University; M.A., Harvard University
Jane Perry.....	Practical Nurse Education Grace Hospital School of Nursing
Elisabeth Price.....	Head, Human Services Department B.S., Blue Mountain College; M.E., University of Mississippi
Sibyl M. Reed.....	Head, General Education Department B.S., M.A., Western Carolina University
James E. Searcy.....	Business B.S., Graduate Study, Western Carolina University
Sheridan Smith.....	Business B.A., Western Carolina University

# PHILOSOPHY

The philosophy of the open door institution has been stated by Dr. Dallas Herring, Chairman of the State Board of Education, as follows:

The only valid philosophy for North Carolina is the philosophy of total education; a belief in the incomparable worth of all human beings, whose claims upon the State are equal before the law and equal before the bar of public opinion; whose talents (however great or however limited or however different from the traditional), the state needs and must develop to the fullest possible degree.

That is why the doors to the institutions in North Carolina's system of community colleges must never be closed to anyone of suitable age who can learn what they teach. We must take the people where they are and carry them as far as they can go within the assigned function of the system.

If they cannot read, then we will simply teach them to read and make them proud of their achievement. If they did not finish high school, but have a mind to do it, then we will offer them a high school education at a time and in a place convenient to them and at a price within their reach.

If their talent is technical or vocational, then we will simply offer them instruction, whatever the field, however complex or however simple, that will provide them with the knowledge and the skill they can sell in the marketplace of our state, and thereby contribute to its scientific and industrial growth.

If their needs are in the great tradition of liberal education then we will simply provide them the instruction, extending through two years of standard college work, which will enable them to go to the University or senior college and on into life in numbers unheard of in North Carolina. If their needs are for cultural advancement, intellectual growth or civic understanding, then we will simply make available to them the wisdom of the ages and the enlightenment of our times and help them on to maturity. 1

The State Board of Education adopted the following policy statement relative to the role of the open door institution:

The Community College System has been established to fill an educational opportunity gap between the high schools and the four-year colleges and the university system. The filling of this gap requires open door admission of both high school graduates and of others who are eighteen years old or older but are not high school graduates. The provision of educational opportunity for this broad range of student ability and needs requires a broad range of curriculum offerings, including college level, high school level, and for some, elementary level studies.

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1, PROCEEDINGS . . . An Orientation Conference . . . Community Colleges, Technical Institutes, Industrial Education Centers; June 7-8, 1964, Chapel Hill, N. C.



The carrying out of this responsibility assigns a unique role to the institutions in the Community College System, which role is fundamentally different from the more selective role traditionally assigned to four-year colleges and universities. Because of this, for a community college to aspire to become a four-year college would not represent normal growth, but would destroy the community college role and replace it with an entirely different type of institution.

The State Board of Education is completely committed to maintaining the unique, comprehensive role of the institutions in the Community College System and is opposed to any consideration of a community college as an embryonic four-year college. <sup>2</sup>

## PURPOSE

As defined in the General Statutes of North Carolina, a "technical institute" is an educational institution dedicated to the educational needs of the particular area which it serves. It has the responsibility of offering vocational programs, technical programs, and general adult courses to any young person or adult in the area.

The purpose of Southwestern Technical Institute is in keeping with the idea that the most meaningful knowledge is that which can be put to productive use by meeting the diverse educational needs of adults within the area and by serving the demands of new and existing industries.

Our aims reflect a firm philosophy that education should equip every individual, within his capacities, with the competence to attain his economic, social and intellectual goals. Physical and mental skills will be developed so that each student will be able to contribute significantly to society. In addition to skills and knowledge, the curriculum offers exploration into the humanities to help students understand their responsibilities of citizenship.

## OBJECTIVES

In keeping with these purposes, the Board of Trustees, the faculty, and the administrative staff have adopted the following specific objectives:

1. To provide expanded educational opportunities for young people and adults who will not continue their education otherwise.
2. To provide relatively inexpensive, nearby educational opportunities for high school graduates, school dropouts, and adults.
3. To provide two-year technical programs for individuals who desire employment as technicians.
4. To provide vocational programs for individuals who seek employment in trades.
5. To provide programs of vocational education for employed adults who need training or re-training or who can profit from the program otherwise.
6. To provide suitable courses for individuals who wish to further their education and enrich their lives.
7. To offer testing, guidance and counseling services to students, as well as to any other person in the area who has need of such service.

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<sup>2</sup>Loc. cit.



# **GENERAL INFORMATION**

## **ACCREDITATION**

Southwestern Technical Institute is an institution of the North Carolina Department of Community Colleges. It is currently accredited by the North Carolina State Board of Education. In addition, it has been fully approved by the Veteran's Administration as well as the North Carolina Department of Vocational Rehabilitation.

Personnel at the Institute are presently engaged in self-study aimed at early recognition and accreditation by the Southern Association of Colleges and Schools.

## **HISTORY**

Under the Community College Act passed in 1963 by the North Carolina General Assembly, a system of comprehensive community colleges, technical institutes, and industrial education centers was created to operate under the State Board of Education.

Southwestern Technical Institute was founded in 1964 as an area educational institution within the system of community colleges of North Carolina. Jackson, Swain, and Macon counties make up the primary service area of this institution.

From the time of its creation in 1964 to January 1, 1968, it was part of Asheville-Buncombe Technical Institute. On January 1, 1968, the school became an independent institution and was renamed Southwestern Technical Institute.

## **LOCATION**

Southwestern Technical Institute is located two miles south of Sylva off the Webster road near the 14th Division, State Highway Commission offices.

Situated on a beautiful hill in the midst of a twenty-three acre tract of land with spectacular scenery in all directions, the Institute is five miles from the Western Carolina University campus and only twenty miles from the Cherokee Indian Reservation and Great Smoky Mountains National Park. Franklin is twenty miles to the west. Cashiers-Highlands is thirty miles south, and the Blue Ridge Parkway is only twelve miles away.

## **LEARNING RESOURCE CENTER**

The Learning Resource Center has a growing collection of books and materials which are primarily scientific and technical. The reference collection contains encyclopedias, many specialized dictionaries and handbooks. In addition to housing the book collection, the Center receives more than 200 magazines and periodicals and several newspapers.

The Learning Resource Center also provides other material such as pamphlets and clippings. Included in the collection are bound volumes and microfilm of several periodicals. The Learning Resource Center provides audiovisual equipment and materials for use by students and faculty.

Library services are directed by a professional librarian. The Library is open from 8:00 a.m. to 9:00 p.m., Monday through Thursday and from 8:00 a.m. to 5:00 p.m. on Friday. The Center is open to persons in business, industry, and the community.

# **ADMISSION REQUIREMENTS AND PROCEDURES**

## **General Procedures**

Southwestern Technical Institute admits students in accordance with the "Open Door" policy. Any applicant who is eighteen years old or older, whether he is a high school graduate or not, can find an educational opportunity fitted to his ability and his need at Southwestern Technical Institute.

Admission requirements are dependent upon the curriculum or course to be taken. The requirements for the associate degree programs are higher than for other programs.

Applicants are accepted directly into a curriculum program if minimum standards are met on entrance tests administered by the institute. When minimum standards are not met, students will be referred to Developmental Studies. The student will be scheduled in specific basic courses to work off deficiencies.

## **Specific Procedures**

Each applicant must complete the following steps in order to enter a pre-employment technical or vocational program.

1. Complete and submit the standard application and health forms. These forms are available from high school counselors or from the Southwestern Technical Institute Student Services Office.
2. Complete a battery of tests administered by the Institute.
3. Take the General Aptitude Test Battery administered by the North Carolina Employment Security Commission and have the scores forwarded to the school if the applicant is planning to enter Practical Nurse Education.
4. Submit a final transcript of high school and post-high school education to the Institute.
5. Arrange a personal interview with the Director of Student Services or the counselor.
6. Provide evidence of acceptable physical and mental health if deemed necessary. All applicants to Cosmetology and Practical Nurse Education must file a complete medical record.

## **ADMISSION PROCEDURE FOR SPECIAL STUDENTS**

While most new students will be seeking enrollment in a curriculum and should follow the steps listed above, the Institute recognizes that many adults in the community will wish to register for one or more courses as a student not a candidate for a degree or diploma. In order to encourage this type of interest, the Institute will allow a qualified person to be admitted to the Institute and enroll for courses without taking the pre-enrollment test battery provided the person does not wish to enter a degree or diploma curriculum.

The Institute reserves the privilege of limiting the number of quarters during which a student may maintain this special status and the number of hours that can be taken before the student has to meet the specific standards.

### **Transfer**

Southwestern Technical Institute will accept credits from all institutions within the Department of Community Colleges as well as from other accredited colleges, technical institutes, and vocational schools. Only course grades of C or better will be accepted and such courses must be comparable to the content of Southwestern Technical Institute courses.

### **Auditing**

By special permission, an applicant may be admitted to certain courses as an auditor. Such students receive no credit for the course(s). Auditors will be expected to attend classes and participate in the same manner as credit students. Fees for auditing students will be identical to those charged to regular students.

### **Notification Of Acceptance**

Qualified applicants for each program will be accepted as admissions procedures are completed on a first-come, first-served basis. Prospective students will be notified of their acceptance immediately after all required information is received.

### **Foreign Students**

The Institute is authorized under Federal law to enroll non-immigrant alien students. Students enrolling under this classification will be treated as nonresident with respect to tuition and fees. An immigrant alien is subject to the same considerations as a citizen.

### **Readmission**

Students with credit from STI who withdraw for any reason before completing the requirements for a diploma or degree may be readmitted by simple application and a conference with the counselor.

### **Advanced Standing**

Applicants who have reason to believe they are proficient in a subject may request credit by examination. The examination may be written, oral, performance, or all of these. Students failing such an examination may not request a second examination until evidence of further study in the subject concerned is presented. Decision of the examining instructor will be final.

No quality points will be awarded for such credit.

## **STUDENT SERVICES**

Student Services is a distinct and vitally important aspect in the development, administration, operation, and future planning of Southwestern Technical Institute. Such services are provided primarily to serve the student effectively.

A definite program of service is offered to assist the student in selecting, entering, progressing within, and completing a program of study. In addition, the individual is provided numerous opportunities for personal development and social growth through a variety of planned activities.

### **Testing**

The Institute provides an extensive program of aptitude, achievement, and individual testing at the school.

### **Counseling**

Southwestern Technical Institute provides a professional, competent counseling program. The purpose of this program is to assist students in solving academic, vocational, personal, and socio-economic problems. This service is most valuable when requested by the students. Therefore, students needing assistance should contact the Student Services Office.

### **Housing**

Southwestern Technical Institute was established to serve students within the commuting distance of the campus. Thus, Southwestern Technical Institute has no dormitory or housing facilities on campus. Although it assumes no responsibility for housing, the Institute will assist out-of-town students in locating suitable living accommodations if it is requested through the Student Services Office.

### **Orientation**

All students enrolling in the fall quarter participate in student orientation. This program is designed to acquaint students with Southwestern Technical Institute's policies, environment, courses, philosophy, staff and other students. Assemblies, open discussions, lectures, and student handbooks help prepare the student for beginning studies at Southwestern Technical Institute.

### **Placement**

Assistance in locating employment is available to all Southwestern Technical Institute students and graduates. Qualified students are referred to employers contacting the Institute, and the school provides facilities for employers desiring on-campus interviews.

## **STUDENT FINANCIAL AID PROGRAM**

Student financial assistance in the form of low interest loans, grants, scholarships, and part-time employment is available to students who apply and qualify for the various aid programs.



Generally aid is provided on a "needs" basis to persons who qualify.

Inquiries about aid and requests for appropriate application forms should be directed to the Student Financial Aid Officer, Southwestern Technical Institute, P. O. Box 95, Sylva, N. C. 28779.

### **College Work-Study Program**

The purpose of the College Work-Study Program is to expand part-time employment opportunities for students, particularly those from low-income families who are in need of the earnings from part-time employment in order to pursue a course of study at an institution of higher education. Federal grants are made to institutions of higher education to enable them to create job opportunities for their eligible students. The institution may arrange for the employment of its eligible students in work for the institution or work in the public interest for a public or private non-profit organization.

The Federal Government currently provides 80 per cent of student earnings. Participating colleges and universities arrange for the other 20 per cent. They are also responsible for selecting the students who receive jobs.

### **National Defense Student Loans**

The National Defense Education Act of 1958 affirms that "we must increase our efforts to identify and educate more of the talent of our Nation. This requires programs that will give assurance that no student of ability will be denied an opportunity for higher education because of financial need." In pursuance of that objective, Title II of the act provides for establishment at institutions of higher education of National Defense Student Loan Funds for the purpose of making long-term, low interest loans to qualified students in need of financial assistance to pursue a course of study on at least a half-time basis at such institutions. The program of study includes loan cancellation provisions designed to attract superior students to the teaching profession for service at all academic levels.

The Federal Government provides 90 per cent of each student loan. Participating colleges and universities provide the other 10 per cent. They are also responsible for determining which student will receive loans and for establishing the size of each loan.

### **COLLEGE FOUNDATION INCORPORATED LOAN FUND**

Legal residents of North Carolina who are enrolled or have been accepted for enrollment in an eligible college, university, technical or vocational school in a full-time undergraduate program are eligible to apply. Applicants must meet certain academic requirements as related to their course of study and must provide proof of financial need. Students in good standing may reapply each year that additional funds are needed.

Students may request loans up to \$1,500 per academic year, but they may not borrow more than \$6,000 during four years of undergraduate study. The interest rate is 1 per cent while in school, during the grace period, and extension periods. The interest rate is 6 per cent during the repayment period.

## **NORTH CAROLINA STATE BOARD OF EDUCATION STUDENT LOAN FUND**

Full-time students enrolled in a vocational or technical program in an institution under the North Carolina Department of Community Colleges.

A maximum of \$300 per year may be borrowed.

### **EDUCATIONAL OPPORTUNITY GRANTS**

The purpose of the program is to provide Educational Opportunity Grants to students of exceptional financial need, who, for the lack of financial means of their own or of their families, would be unable to enter or to remain in institutions of higher education participating in the program. The Educational Opportunity Grants Program was established by Title IV, Part A, of the Higher Education Act of 1965. (Public Law 89-329)

The Federal Government provides the funds for each EOG. Participating institutions are responsible for selecting the students to receive EOGs and establishing the amount they will need.

### **OTHER AID PROGRAMS**

#### **Nursing Scholarships**

C. J. Harris Community Hospital Auxiliary and McClure Foundation award scholarships to eligible nursing students.

These awards are based upon scholarship, need and recommendations.

#### **Veterans Administration**

Eligible persons may receive education benefits under the G. I. Bill or the War Orphans Plan. Recently the law was passed that wives of disabled veterans may attend school on the G. I. Bill.

#### **Moody Funeral Home**

Moody Funeral Home of Sylva, North Carolina provides an annual gift to be used in student financial aid.

#### **North Carolina Division of Rehabilitation**

The institute is approved for the training and education of personnel who qualify under the provisions of the North Carolina Division of Vocational Rehabilitation, Department of Public Instruction.

#### **Art Scholarship**

Southwestern Technical Institute offers four scholarships each year to the four top contestants in the annual Commercial Art contest sponsored by the school.

#### **Social Security Administration**

Eligible persons may receive educational benefits from the Social Security Administration if the head of the household is over 62 and retired or disabled.

## **Bureau of Indian Affairs**

Educational assistance is provided to the Cherokee Indians through the Bureau of Indian Affairs, Cherokee, North Carolina.

### **Suzanne M. Davis**

Low interest loans are available to Cherokee Indians through the Suzanne M. Davis Loan Fund administered through the Historical Association, Cherokee, North Carolina.

## **EMERGENCY LOAN FUND**

A limited amount of money is available to certain qualified students in the form of emergency loans.

## **FEES AND TUITION**

### **TUITION PER QUARTER**

Full-Time Student.....	\$32.00
Part-Time Student (Per quarter credit hour).....	\$ 2.50

### **GRADUATION**

Vocational.....	\$12.00
Technical.....	\$14.00

ACTIVITY (per year).....\$10.00

INSURANCE (per year).....\$ 2.25

Graduation fees will be paid when the student registers for his last quarter of work prior to graduation.

Student activity fees will be assessed at the rate of \$2.50 per quarter. Activity fees for part-time students will be assessed on a pro rata basis. In addition to the above fees, students in Cosmetology and Practical Nursing are required to pay an additional insurance fee and to purchase uniforms. Cosmetology student must purchase a cosmetology kit. Students in Automotive Mechanics will be required to purchase necessary tools.

Because costs are so inexpensive, the Institution does not provide for the installment payment of fees and charges.

No registration or tuition fees are charged students enrolling in Adult Education, Extension, Firemanship or other special classes. Small charges in some instances, however, may be made for instructional materials or textbooks required in these classes.

### **Non-Resident Fees**

Any student whose legal residence is outside North Carolina, or, in the case of students who are boarding or living with relatives in the community, whose parents or guardians live outside the state, will pay tuition fees two and one-half times the resident rate.

Any student entering North Carolina for the specific purpose of enrolling in this institution shall be identified as a non-resident for the entire time that he is enrolled, even though he may purchase property, pay taxes, and vote in the regular public elections.

# **REFUNDS**

## **For Tuition Fees**

Tuition refund for students shall not be made unless the student is, in the judgment of the Institution, compelled to withdraw for unavoidable reasons. In such cases, 2/3 of the student's tuition may be refunded if the student officially withdraws within 10 calendar days after the first day of classes as published in the school calendar. Tuition refunds will not be considered after that time. Tuition refunds will not be considered for tuitions of five dollars (\$5.00) or less, unless a course or curriculum fails to materialize.

In order to comply with federal regulations in institutions not regionally accredited, the State Board authorized modifications of the tuition refund policy so that veterans or war orphans receiving benefits under U. S. Code, Title 38, Chapters 33 and 35, can be refunded the pro rata portion of the tuition fee not used up at the time of withdrawal of such students.

## **Refunds For Graduation Fees**

A student must secure permission from the President to be absent from graduation because of unforeseen difficulties or emergencies. A student may then receive a refund of one half of his graduation fees. If excused, vocational students will be refunded \$6.00 and technical students will be refunded \$7.00. By keeping at least half the fee, the school will be able to cover the cost of diplomas, of mailing diplomas, plus any incidental expense which might occur.

## **Time Due, Deferred Payment, and Obligation Toward Tuition and Fees**

Tuition and fees are due and payable at the time of the student's registration. No student will be permitted to graduate or register for a new quarter if he has an unpaid balance due or an account from any previous quarter unless payment of such an outstanding balance has been guaranteed in writing by a financially responsible person or organization.

Any student experiencing special difficulties may make special arrangements with the business manager by following the above procedure.

In the event a student completes registration and withdraws before paying the appropriate fees and tuition, the institution will make three attempts during the current year by letter and personal contact to collect these funds. If the institution is unsuccessful, the account will be turned over to the North Carolina Attorney General's office for disposition.

# **TEXTBOOKS**

All curriculum students will be expected to purchase adopted textbooks in all courses. These textbooks will be sold at less than retail price to students. Every effort will be made to keep the quarterly price of all textbooks between \$15 and \$30.

Recommended textbooks are to be purchased at the beginning of the quarter in which they are to be used. Textbooks used in any one quarter must be purchased by the end of the second week of classes of that particular quarter.



# **CURRICULA DEGREES, DIPLOMAS AND CERTIFICATES**

## **Degree Program Defined**

Southwestern Technical Institute will confer an Associate of Applied Science degree in the name of the State Board of Education in all technical curricula. A state comprehensive examination may be required before graduation in any technical curricula.

## **Diploma Program Defined**

Southwestern Technical Institute will grant diplomas in the name of the Southwestern Technical Institute Board of Trustees upon successful completion of any vocational level curricula four quarters in length (or the part-time equivalency). A state comprehensive examination may be required before graduation in any vocational level curricula.

## **Certificate Program Defined**

Certificates will be issued in the name of Southwestern Technical Institute to students who successfully complete curricula less than four full quarters in length.

## **GRADING SYSTEM**

Grades will be issued at midterm and at the end of the term. Students will be graded on the acquirement of technical skills, ability to work under supervision, initiative, and the ability to apply related information.

Students enrolled in any curriculum will be graded by the following system:

A	93-100	Excellent
B	86-92	Above Average
C	75-85	Passing or Average
I	Incomplete	
WP	Withdrawal Passing — Student doing passing work at the time of withdrawal.	
WI	Withdrawal Incomplete — Student doing failing work at the time of withdrawal.	

Any student who receives an incomplete may choose to negotiate a written contract with the instructor involved, or he may choose to let the incomplete stand and have a grade of withdrawal incomplete (WI) entered on his permanent record. Contracts negotiated between the student and the instructor will specify a definite completion date for the requirements in addition to the types of activities set forth by the instructor to help the student achieve the minimum objectives of the course. At the option of the instructor, the contracts may include: general education courses; individualized programs, including reading, term papers, projects; and other innovative ideas which help the student achieve the minimum objectives of the course. If the student does not complete the minimum objectives in the time negotiated in the contract, the student is dropped from the course.

A student, who receives an I in a course which is pre-requisite to another course, has the responsibility of obtaining the written permission of the instructor in which the I was received and the instructor of the course in which the student desires to enroll.

## QUALITY POINTS

At the end of each quarter quality points are assigned in accordance with the following formula: The minimum quality point ratio for graduation is 2.00 or an average grade of C.

A—4 quality points per credit hour

B—3 quality points per credit hour

C—2 quality points per credit hour

I—no quality points

WP—given when a student officially withdraws and is passing his work at the time. This will not influence the quality point ratio.

WF—given when the student officially withdraws and is failing his work at the time. This will not influence the quality point ratio.

Quality point ratios are determined by dividing the total number of quality points by the number of hours attempted. A ratio of 2.00 indicates that the student has an average of C.

## HONOR ROLL

Students who acquire a quality point ratio of 3.00 or higher at the end of a quarter will be named to the Honor Roll.

## ATTENDANCE REQUIREMENTS

All students are expected to be present and regular in attendance for all scheduled classes and school functions. Absences will be considered justified and excusable only in cases of emergencies, serious illness, or death in the immediate family.

Any work missed because of excused absences must be made up.

## GRADUATION REQUIREMENTS

The student will be held responsible for fulfilling all requirements for the degree or diploma for which he is registered. It is also the student's responsibility to apply officially to the Student Services Office for his degree or diploma at the beginning of the last quarter the student is enrolled. The \$12.00 or \$14.00 graduation fee must accompany the application.

Every candidate for an Associate Degree in Applied Science or a diploma must satisfy all of the requirements for the specific program from which he is graduating.

Candidates for graduation are required to participate in graduation exercises in order to receive their degree or diploma. Exceptions to this requirement may be made if justifiable reasons are presented in writing to the President.

## **STUDENT CONDUCT**

Students of Southwestern Technical Institute will be expected to conduct themselves at all times as mature adults. Students who do not respect the rights and privileges and personal property of other students and who fail to demonstrate a high regard for school facilities and property will be subject to dismissal.

Possession of alcoholic beverages or hallucinatory drugs will not be condoned on the campus or at Institute sponsored functions. Violation of rules and regulations may subject the student to disciplinary measures or dismissal.

## **STUDENT LOUNGES**

For the convenience of students and faculty, each building provides a refreshment and lounge area equipped with a variety of modern vending machines. Food and drinks may not be carried into a classroom, shop or laboratory.

## **CHANGE OF SCHEDULE**

Changes in class schedule after registration may be made only with the approval of the Department Head and the Registrar. The last day that courses may be dropped or added will be no later than the tenth class day after the beginning of each quarter.

## **WITHDRAWAL POLICY**

If a student wishes to withdraw for any reason, he should first discuss it with his advisor; second, report his decision to the Student Services Office; third, obtain a clearance form that will be signed by each subject instructor, including the librarian and the business office.

## **STUDENT GOVERNMENT**

Students at Southwestern Technical Institute have the opportunity to participate in Student Government through the Student Government Association.

Copies of the Student Government Constitution are available through the Student Personnel Office.

# DEPARTMENT OF COMMERCIAL SPECIALTIES

## BUSINESS:

Accounting

Business Administration

Secretarial Science

Commercial Art and Advertising Design

## ACCOUNTING

The specific objectives of the Accounting Curriculum are to develop the following competencies:

1. Understanding of the principles of organization and management in business operations.
2. Understanding of the fundamentals of accounting and analysis of financial statements.
3. Understanding and skill in effective communications for business.

### Occupational Opportunities

The duties and responsibilities of an accountant vary somewhat in different firms. Some of the duties an accountant might perform are record transactions, render periodic reports, maintain cost records, make special reports, complete tax returns, audit the books, and advise management in areas of financial affairs.

The graduate of the Accounting Curriculum may qualify for various jobs in business and industry leading to any of the following accounting positions: accounting clerk, payroll clerk, accounting machine operator, auditor, and cost accountant. This training plus further experience should prepare them to become office managers, accounting supervisors and to fill other responsible positions in a business firm.

## ACCOUNTING

### First Quarter

			Class	Lab	Hours Credit
ENG	100	English I	3	2	4
MAT	110	Business Math	5	0	5
BUS	101	Introduction to Business	3	2	4
BUS	110	Office Machines	2	2	3
BUS	102	Typewriting I	2	3	3
EDU	101	Educational Orientation	1	0	1
			<hr/> 16	<hr/> 9	<hr/> 20

### Second Quarter

ENG	101	English II	3	2	4
BUS	120	Accounting I	4	3	5
ECO	102	Economics	3	2	4
BUS	115	Business Law	3	0	3
			<hr/> 13	<hr/> 7	<hr/> 16



**Third Quarter**

ENG	102	English III	3	2	4
ECO	104	Economics	3	2	4
BUS	121	Accounting II	4	3	5
BUS	116	Business Law	3	0	3
BUS	247	Business Insurance	3	0	3
			<hr/>	<hr/>	<hr/>
			16	7	19

**Fourth Quarter**

ENG	204	English IV	3	0	3
BUS	122	Accounting III	4	3	5
BUS	235	Business Management	3	2	4
BUS	123	Business Finance	3	0	3
SSC	201	Social Science	3	2	4
			<hr/>	<hr/>	<hr/>
			16	7	19

*or PSY 102 General Psychology			3	0	3
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**Fifth Quarter**

ENG	103	English V	3	2	4
BUS	222	Intermediate Accounting I	4	3	5
BUS	229	Income Taxes	3	2	4
BUS	239	Marketing	5	0	5
			<hr/>	<hr/>	<hr/>
			15	7	18

**Sixth Quarter**

BUS	271	Office Management	3	2	4
BUS	223	Intermediate Accounting II	4	3	5
BUS	232	Sales Development	3	2	4
BUS	225	Cost Accounting	3	2	4
			<hr/>	<hr/>	<hr/>
			13	9	17

**Seventh Quarter**

BUS	226	Managerial Accounting	3	2	4
BUS	227	Accounting Systems	3	2	4
EDP	104	Introduction to Data Processing Systems	3	2	4
		Elective	3	0	3
			<hr/>	<hr/>	<hr/>
			12	6	15

**ACCOUNTING****Course Descriptions by Quarters****First Quarter****ENG 100—ENGLISH I**

A sincere effort to encourage the student's development of reading comprehension and reading rate. Emphasizing the grasp of basic ideas rather than words. To have a storehouse of workable techniques which the student may use in reading assignments. Thus, helping him to identify, interpret and evaluate ideas. With purposeful practice and adequate motivation, the student's achievement will improve.

**MAT 110—BUSINESS MATHEMATICS**

This course stresses the fundamental operations and their application to business problems. Topics covered include payrolls, price marking, interest and discount, commission, taxes, and pertinent uses of mathematics in the field of business.

**BUS 101—INTRODUCTION TO BUSINESS**

A survey of the business world with particular attention devoted to the structure of the various types of business organizations, methods of financing, internal organization, and management.

**BUS 110—OFFICE MACHINES**

A general survey of the business and office machines. Students will receive training in the techniques, processes, operation and application of the ten-key adding machines, full keyboard adding machines, and calculator.

**BUS 102—TYPEWRITING**

Introduction to the touch typewriting system with emphasis on correct techniques, mastery of the keyboard, simple business correspondence, tabulation, and manuscripts.

**EDU 101—EDUCATIONAL ORIENTATION**

Designed to aid the student in the understanding of the technical institute. Faculty and staff members explain the various functions of the institute. Exercises in developing study habits, writing and research techniques are completed by the students.

**Second Quarter****ENG 101—ENGLISH II**

Designed to aid the student in the improvement of self-expression in grammar. The approach is functional with emphasis on grammar, diction, sentence structure, punctuation, and spelling. Intended to stimulate students in applying the basic principles of English grammar in their day-to-day situations in industry and social life. Prerequisite: Eng 100

**BUS 120—ACCOUNTING I**

Principles, techniques and tools of accounting, for understanding of the mechanics of accounting. Collecting, summarizing, analyzing, and reporting information about service and mercantile enterprises, to include practical application of the principles learned. Prerequisite: MAT 110.

**ECO 102—ECONOMICS**

The fundamental principles of economics including the institutions and practices by which people gain a livelihood. Included is a study of the laws of supply and demand and the principles bearing upon production, exchange, distribution and consumption both in relation to the individual enterprise and to society at large.

**BUS 115—BUSINESS LAW**

A general course designed to acquaint the student with certain fundamentals and principles of business law, including contracts, negotiable instruments, and agencies.

**Third Quarter****ENG 102—ENGLISH III**

Designed to aid the student in the improvement of self-expression in business and technical composition. Emphasis is on the sentence, paragraph and whole composition. Prerequisite: ENG 101.

**ECO 104—ECONOMICS**

Greater depth in principles of economics, including a penetration into the composition and pricing of national output, distribution of income, international trade and finance, and current economic problems.

Prerequisite: ECO 102.

**BUS 121—ACCOUNTING II**

Partnership and corporation accounting including a study of payrolls, federal and state taxes. Emphasis is placed on the recording summarizing and interpreting data for management control rather than on bookkeeping skills. Accounting services are shown as they contribute to the recognition and solution of management problems. Prerequisite: BUS 120.

**BUS 116—BUSINESS LAW**

Includes the study of laws pertaining to bailments, sales, risk-bearing, partnership-corporation, mortgages, and property rights.

Prerequisite: BUS 115.

**BUS 247—BUSINESS INSURANCE**

A presentation of the basic principles of risk insurance and their application. A survey of the various types of insurance is included. Prerequisite: BUS 115.

**Fourth Quarter****ENG 204—ENGLISH IV**

A study of basic concepts and principles of oral communications to enable

the student to communicate with others. Emphasis is placed on the speaker's attitude, improving diction, voice, and the application of particular techniques of theory to correct speaking habits and to produce effective oral presentation. Particular attention given to conducting meetings, conferences, and interviews. Prerequisite: ENG 102.

#### **BUS 122—ACCOUNTING III**

Study of long term liabilities and investments, analysis of financial statements, cost, budgets and flow of funds. Prerequisite: BUS 121.

#### **BUS 235—BUSINESS MANAGEMENT**

Principles of business management including overview of major functions of management, such as planning, staffing, controlling, directing, and financing. Clarification of the decision-making function versus the operating function. Role of management in business—qualifications and requirements.

#### **BUS 123—BUSINESS FINANCE**

Financing of business units, as individuals, partnerships, corporations, and trusts. A detailed study is made of short-term and consumer financing.

#### **SSC 201—SOCIAL SCIENCE**

An integrated course in the social sciences drawing from the fields of anthropology, psychology, history, and sociology.

#### **PSY 102—GENERAL PSYCHOLOGY**

A study of the various fields of psychology; the developmental process; motivation; emotion, frustration and adjustment; mental health; attention and perception; problems of group living. Attention is given to applications of these topics to problems of study, self-understanding and adjustment to the demands of society.

### **Fifth Quarter**

#### **ENG 103—ENGLISH V**

The fundamentals of English are utilized as a background for the organization and techniques of modern report writing. Exercises in developing typical reports using writing techniques and graphic devices are completed by the students. Practical application in the preparation of a full-length report is required of each student at the end of the term. This report must have to do with something in his chosen curriculum. Prerequisite: ENG 204.

#### **BUS 222—INTERMEDIATE ACCOUNTING I**

Through treatment of the field of general accounting, providing the necessary foundation for specialized studies that follow. The course includes among other aspects, the balance sheet, income and retained earnings statements, fundamental processes of recording, cash and temporary investments, and analysis of working capital. Prerequisite: BUS 122.

#### **BUS 229—INCOME TAXES**

Application of federal and state taxes to various businesses and business conditions. A study of the following taxes: income, payroll, intangible, capital gain, sales and use, excise, and inheritance. Prerequisite: BUS 122.

#### **BUS 239—MARKETING**

A general survey of the field of marketing, with a detailed study of the functions, policies, and institutions involved in such marketing process.

### **Sixth Quarter**

#### **BUS 271—OFFICE MANAGEMENT**

Presents the fundamental principles of office management. Emphasis on the role of office management including its functions, office automation, planning, controlling, organizing and actuating office problems.

#### **BUS 223—INTERMEDIATE ACCOUNTING II**

Additional study of intermediate accounting with emphasis on investments, plant and equipment, intangible assets and deferred charges, longterm liabilities, paid in capital, retained earnings, and special analytical processes. Prerequisite: BUS 222.

#### **BUS 232—SALES DEVELOPMENT**

A study of retail, wholesale and specialty selling. Emphasis is placed upon mastering and applying the fundamentals of selling. Preparation for and execution of sales demonstrations required.

## BUS 225—COST ACCOUNTING

Nature and purposes of cost accounting; accounting for direct labor materials and factory overhead; job cost and standard cost principles and procedures; selling and distribution cost, budgets and executive use of cost figures. Prerequisite: BUS 122.

### Seventh Quarter

## BUS 226—MANAGERIAL ACCOUNTING

Interpreting accounting data for managerial decisions. Budget preparations. Prerequisite: BUS 225.

## BUS 227—ACCOUNTING SYSTEMS

Design and development of an accounting system for a small business. Prerequisite: BUS 223.

## EDP 104—INTRODUCTION TO DATA PROCESSING SYSTEMS

Fundamental concepts and operational processing systems, as an aid in developing a basic knowledge of computers, prerequisite to the detail study of particular computer problems.

Elective

# BUSINESS ADMINISTRATION

The specific objectives of the Business Administration Curriculum are to develop the following competencies:

1. Understanding the principles of organization and management in business operation.
2. Understanding and skill in effective communication for business.
3. Knowledge of human relations as it applies to the successful operations in the rapidly expanding economy.

## Occupational Opportunities

The graduate of the Business Administration Curriculum may enter any of a variety of career opportunities from beginning sales person or office clerk to manager trainee. The duties and responsibilities of this graduate vary in different firms. They might include: making up and filing reports, tabulating and posting data in various books, sending out bills, checking calculations, adjusting complaints, operating various office machines, and assisting manager in supervising. Positions are available in businesses such as advertising; banking; credit; finance; retailing; wholesaling; hotel, tourist, and travel industry; insurance; transportation; and communications.

First Quarter			Class	Lab	Hours Credit
ENG	100	English I	3	2	4
MAT	110	Business Math	5	0	5
BUS	101	Introduction to Business	3	2	4
BUS	110	Office Machines	2	2	3
***BUS	102	Typewriting	2	3	3
EDU	101	Educational Orientation	1	0	1
			16	9	20
Second Quarter					
ENG	101	English II	3	2	4
BUS	120	Accounting I	4	3	5
ECO	102	Economics	3	2	4
BUS	115	Business Law	3	0	3
		Elective	3	2	4
			16	9	20
* A proficiency test required					
** or PSY 102 General Psychology			3	0	3



### Third Quarter

ENG	102	English III	3	2	4
ECO	104	Economics	3	2	4
BUS	121	Accounting II	4	3	5
BUS	116	Business Law	3	0	3
BUS	247	Business Insurance	3	2	4
			<hr/> 16	<hr/> 9	<hr/> 20

### Fourth Quarter

ENG	204	English IV	3	2	4
EDP	104	Introduction to Data Processing Systems	3	2	4
BUS	123	Business Finance	3	2	4
SSC	201	Social Science	3	2	4
BUS	235	Business Management	3	2	4
			<hr/> 15	<hr/> 10	<hr/> 20

### Fifth Quarter

ENG	206	English V	3	2	4
BUS	229	Income Taxes	3	2	4
BUS	243	Advertising	3	2	4
BUS	239	Marketing	5	0	5
		Elective	3	2	4
			<hr/> 17	<hr/> 8	<hr/> 21

### Sixth Quarter

ENG	103	English VI	3	2	4
BUS	271	Office Management	3	2	4
BUS	272	Principles of Supervision	3	2	4
PSY	206	Applied Psychology	3	2	4
		Elective	3	2	4
			<hr/> 15	<hr/> 10	<hr/> 20

### Seventh Quarter

BUS	288	Organizing a Small Business	3	4	5
ECO	106	Labor Economics	3	2	4
BUS	270	Methods For Managerial Decisions	3	0	3
BUS	232	Sales Development	3	2	4
		Elective	3	2	4
			<hr/> 15	<hr/> 10	<hr/> 20

## BUSINESS ADMINISTRATION

### Course Descriptions by Quarters

#### First Quarter

##### ENG 100—ENGLISH I

A sincere effort to encourage the student's development of reading comprehension and reading rate. Emphasizing the grasp of basic ideas rather than words. To have a storehouse of workable techniques which the student may use in reading assignments. Thus, helping him to identify, interpret and evaluate ideas. With purposeful practice and adequate motivation, the student's achievement will improve.

##### MAT 110—BUSINESS MATHEMATICS

This course stresses the fundamental operations and their application to business problems. Topics covered include payrolls, price marking, interest and discount, commission, taxes, and pertinent uses of mathematics in the field of business.

## **BUS 101—INTRODUCTION TO BUSINESS**

A survey of the business world with particular attention devoted to the structure of the various types of business organizations, methods of financing, internal organization, and management.

## **BUS 110—OFFICE MACHINES**

A general survey of the business and office machines. Students will receive training in the techniques, processes, operation and application of the ten-key adding machines, full keyboard adding machines, and calculator.

## **BUS 102—TYPEWRITING**

Introduction to the touch typewriting system with emphasis on correct techniques, mastery of the keyboard, simple business correspondence, tabulation, and manuscripts.

## **EDU 101—EDUCATIONAL ORIENTATION**

Designed to aid the student in the understanding of the technical institute. Faculty and staff members explain the various functions of the institute. Exercises in developing study habits, writing and research techniques are completed by the students.

### **Second Quarter**

## **ENG 101—ENGLISH II**

Designed to aid the student in the improvement of self-expression in grammar. The approach is functional with emphasis on grammar, diction, sentence structure, punctuation, and spelling. Intended to stimulate students in applying the basic principles of English grammar in their day-to-day situations in industry and social life. Prerequisite: ENG 100.

## **BUS 120—ACCOUNTING**

Principles, techniques and tools of accounting, for understanding of the mechanics of accounting. Collecting, summarizing, analyzing and reporting information about service and mercantile enterprises, to include practical application of the principles learned. Prerequisite: MAT 110.

## **ECO 102—ECONOMICS**

The fundamental principles of economics including the institutions and practices by which people gain a livelihood. Included is a study of the laws of supply and demand and the principles bearing upon production, exchange, distribution and consumption both in relation to the individual enterprise and to society at large.

## **BUS 115—BUSINESS LAW**

A general course designed to acquaint the student with certain fundamentals and principles of business law, including contracts, negotiable instruments, and agencies.

### **Third Quarter**

## **ENG 102—ENGLISH III**

Designed to aid the student in the improvement of self-expression in business and technical composition. Emphasis is on the sentence, paragraph and whole composition. Prerequisite: ENG 101.

## **ECO 104—ECONOMICS**

Greater depth in principles of economics, including a penetration into the composition and pricing of national output, distribution of income, international trade and finance, and current economic problems. Prerequisite: ECO 102.

## **BUS 121—ACCOUNTING II**

Partnership and corporation accounting including a study of payrolls, federal and state taxes. Emphasis is placed on the recording summarizing and interpreting data for management control rather than on bookkeeping skills. Accounting services are shown as they contribute to the recognition and solution of management problems. Prerequisite: BUS 120.

## **BUS 116—BUSINESS LAW**

Includes the study of laws pertaining to bailments, sales, risk-bearing, partnership-corporation, mortgages, and property rights. Prerequisite: BUS 115.

## **BUS 247—BUSINESS INSURANCE**

A presentation of the basic principles of risk insurance and their application. A survey of the various types of insurance is included. Prerequisite: BUS 115.

#### **Fourth Quarter**

##### **ENG 204—ENGLISH IV**

A study of basic concepts and principles of oral communications to enable the student to communicate with others. Emphasis is placed on the speaker's attitude, improving diction, voice, and the application of particular techniques of theory to correct speaking habits and to produce effective oral presentation. Particular attention given to conducting meetings, conferences, and interviews. Prerequisite: ENG 102.

##### **EDP 104—INTRODUCTION TO DATA PROCESSING SYSTEMS**

Fundamental concepts and operational processing systems, as an aid in developing a basic knowledge of computers, prerequisite to the detailed study of particular computer problems.

##### **BUS 123—BUSINESS FINANCE**

Financing of business units, as individuals, partnerships, corporations, and trusts. A detailed study is made of short-term and consumer financing.

##### **SSC 201—SOCIAL SCIENCE**

An integrated course in the social sciences drawing from the fields of anthropology, psychology, history, and sociology.

##### **BUS 235—BUSINESS MANAGEMENT**

Principles of business management including overview of major functions of management, such as planning, staffing, controlling, directing, and financing. Clarification of the decision making function versus the operating function. Role of management in business qualifications and requirements.

#### **Fifth Quarter**

##### **ENG 206—ENGLISH V**

Develops skills in techniques in writing business communications. Emphasis is placed on writing action-getting sales letters and prospectuses, business reports, summaries of business conferences, letters involving credit, collections, adjustments, complaints, orders, acknowledgements, remittances and inquiry. Prerequisite: ENG 102.

##### **BUS 229—INCOME TAXES**

Application of federal and state taxes to various businesses and business conditions. A study of the following taxes: income, payroll, intangible, capital gain, sales and use, excise, and inheritance. Prerequisite: BUS 122.

##### **243—ADVERTISING**

The role of advertising in a free economy and its place in the media of mass communications. A study of advertising appeals, product and market research, selection of media, means of testing effectiveness of advertising. Theory and practice of writing advertising copy or various media.

##### **BUS 239—MARKETING**

A general survey of the field of marketing, with a detailed study of the functions, policies, and institutions involved in such marketing process.

#### **Sixth Quarter**

##### **ENG 103—ENGLISH VI**

The fundamentals of English are utilized as a background for the organization and techniques of modern report writing. Exercises in developing typical reports using writing techniques and graphic devices are completed by the students. Practical application in the preparation of a full-length report is required of each student at the end of the term. This report must have to do with something in his chosen curriculum. Prerequisite: ENG 204.

##### **BUS 271—OFFICE MANAGEMENT**

Presents the fundamental principles of office management. Emphasis on the role of office management including its functions, office automation, planning, controlling, organizing and actuating office problems.

##### **BUS 272—PRINCIPLES OF SUPERVISION**

Introduces the basic responsibilities and duties of the supervisor and his relationship to superiors, subordinates, and the associates. Emphasis on securing effective work force and the role of the supervisor. Methods of supervision are stressed.

##### **PSY 206—APPLIED PSYCHOLOGY**

A study of the principles of psychology that will be of assistance in the

understanding of inter-personal relations on the job. Motivation, feelings and emotions are considered with particular reference to on-the-job problems. Other topics investigated are employee selection, supervision, job satisfaction and industrial conflicts.  
Elective

**Seventh Quarter**

**BUS 288—ORGANIZING A SMALL BUSINESS**

A study of the problems in the fields of organization, personnel, finance, sales outlets price policies, regulations by governments, and taxation. In a special project, the students will simulate the procedures of organizing a small business.

**ECO 106—LABOR ECONOMICS**

Current labor problems and theories; the labor market; the development of labor unions; wage theories and the development of effective labor and wage policies. Prerequisite: ECO 104.

**BUS 270—METHODS FOR MANAGERIAL DECISIONS**

This course is designed to explain useful techniques which have been developed to improved decision making in management. Value analysis, payoff tables and decision trees; critical path analysis- Pert, and Operations Research are introduced. Prerequisite: BUS 101.

**BUS 232—SALES DEVELOPMENT**

A study of retail, wholesale and specialty selling. Emphasis is placed upon mastering and applying the fundamentals of selling. Preparation for and execution of sales demonstrations required.

Elective

**SECRETARIAL SCIENCE**

The demand for better qualified secretaries in our ever-expanding business, industry, government, and professional world is becoming more acute. The purpose of this curriculum is to outline a training program that will provide training in the accepted procedures required by the business, industrial and professional areas to enable persons to become proficient soon after employment in their particular field.

The student may take courses in shorthand or have the option of courses that give them a broader business background. This option gives the student a choice of concentrated study preparing her for employment as a stenographer and secretary or for a variety of secretarial positions where shorthand skills are not required.

The special training in secretarial subjects is supplement by related courses in mathematics, accounting, business law, and personality development.

**SECRETARIAL SCIENCE**

**(Shorthand Option)**

**First Quarter**

			<b>Class</b>	<b>Lab</b>	<b>Hours</b>	<b>Credit</b>
ENG	100	English I	3	2	4	
MAT	110	Business Math	5	0	4	
BUS	101	Introduction to Business	3	2	4	
**BUS	102	Typewriting I (or elective)	2	3	3	
**BUS	106	Shorthand I (or elective)	3	2	4	
ECU	101	Educational Orientation	1	0	1	
			<hr/> 16	<hr/> 9	<hr/> 20	

\* A proficiency test required  
\*\* or Psy 102 General Psychology



**Second Quarter**

ENG	101	English II	3	2	4
BUS	103	Typewriting II	2	3	3
BUS	107	Shorthand II (or elective)	3	2	4
BUS	115	Business Law	3	0	3
ECO	102	Economics	3	2	4
			<hr/>	<hr/>	<hr/>
			14	9	18

**Third Quarter**

ENG	102	English III	3	2	4
BUS	104	Typewriting III	2	3	3
BUS	108	Shorthand III (or elective)	3	2	4
BUS	110	Office Machines	2	2	3
BUS	183	Terminology and Vocabulary (Technical, Legal, Medical)	3	0	3
			<hr/>	<hr/>	<hr/>
			13	9	17

**Fourth Quarter**

ENG	204	English IV	3	0	4
BUS	120	Accounting	4	3	5
BUS	206	Dictation and Transcriptions (or elective)	3	2	4
BUS	205	Advanced Typewriting	2	3	3
BUS	211	Office Machines and Machine Transcription	2	2	3
			<hr/>	<hr/>	<hr/>
			14	10	19

**Fifth Quarter**

BUS	207	Dictation and Transcription (or elective)	3	2	4
BUS	112	Filing	3	0	3
SSC	201	Social Science	3	2	4
PSY	112	Personality Development	3	0	3
BUS	121	Accounting	4	3	5
			<hr/>	<hr/>	<hr/>
			16	7	19

**Sixth Quarter**

ENG	205	English V for Secretaries	3	0	4
BUS	214	Secretarial Procedures	3	2	4
BUS	208	Dictation and Transcription (or elective)	3	4	5
BUS	271	Office Management	3	2	4
EDP	104	Intro. to Data Processing	3	2	4
			<hr/>	<hr/>	<hr/>
			15	10	21

**Seventh Quarter**

BUS	215E	Office Application	0	30	10
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**First Quarter Elective**

PSY	102	General Psychology	3	0	3
BUS	102L	Business Lab	0	6	3

**Second Quarter Elective**

BUS	103L	Business Lab	0	6	3
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**SECRETARIAL SCIENCE****Course Descriptions by Quarters****First Quarter****ENG 100—ENGLISH I**

A sincere effort to encourage the student's development of reading comprehension and reading rate. Emphasizing the grasp of basic ideas rather

than words. To have a storehouse of workable techniques which the student may use in reading assignments. Thus, helping him to identify, interpret and evaluate ideas. With purposeful practice and adequate motivation, the student's achievement will improve.

#### **MAT 110—BUSINESS MATHEMATICS**

This course stresses the fundamental operations and their application to business problems. Topics covered include payrolls, price marking, interest and discount, commission, taxes, and pertinent uses of mathematics in the field of business.

#### **BUS 101—INTRODUCTION TO BUSINESS**

A survey of the business world with particular attention devoted to the structure of the various types of business organizations, methods of financing, internal organization, and management.

#### **BUS 102—TYPEWRITING**

Introduction to the touch typewriting system with emphasis on correct techniques, mastery of the keyboard, simple business correspondence, tabulation, and manuscripts.

#### **BUS 106—SHORTHAND**

A beginning course in the theory and practice of reading and writing shorthand. Emphasis on phonetics, penmanship, word families, brief forms, and phrases.

#### **EDU 101—EDUCATIONAL ORIENTATION**

Designed to aid the student in the understanding of the technical institute. Faculty and staff members explain the various functions of the institute. Exercises in developing study habits, writing and research techniques are completed by the students.

### **Second Quarter**

#### **ENG 101—ENGLISH II**

Designed to aid the student in the improvement of self-expression in grammar. The approach is functional with emphasis on grammar, diction, sentence structure, punctuation, and spelling. Intended to stimulate students in applying the basic principles of English grammar in their day-to-day situations in industry and social life. Prerequisite: ENG 100.

#### **BUS 103—TYPEWRITING**

Instruction emphasizes the development of speed and accuracy with further mastery of correct typewriting techniques. These skills and techniques are applied in tabulation, manuscript, correspondence, and business forms. Prerequisite: BUS 102 or the equivalent. Speed requirement, 30 words per minute for five minutes.

#### **BUS 107—SHORTHAND**

Continued study of theory with greater emphasis on dictation and elementary transcription. Prerequisite: BUS 106 or equivalent.

#### **BUS 115—BUSINESS LAW**

A general course designed to acquaint the student with certain fundamentals and principles of business law, including contracts, negotiable instruments, and agencies.

#### **ECO 102—ECONOMICS**

The fundamental principles of economics including the institutions and practices by which people gain a livelihood. Included is a study of the laws of supply and demand and the principles bearing upon production, exchange, distribution and consumption both in relation to the individual enterprise and to society at large.

### **Third Quarter**

#### **ENG 102—ENGLISH III**

Designed to aid the student in the improvement of self-expression in business and technical composition. Emphasis is on the sentence, paragraph and whole composition. Prerequisite: ENG 101.

#### **BUS 104—TYPEWRITING III**

Emphasis on production typing, problems and speed building. Attention to the development of the student's ability to function as an expert typist,

producing mailable copies. The production units are tabulation, manuscript, correspondence, and business forms. Prerequisite: BUS 103 or the equivalent. Speed requirement, 40 words per minute for 5 minutes.

#### **BUS 108—SHORTHAND III**

Theory and speed building. Introduction to office style dictation. Emphasis on development of speed in dictation and accuracy in transcription. Prerequisite: BUS 107.

#### **BUS 110—OFFICE MACHINES**

A general survey of the business and office machines. Students will receive training in the techniques, processes, operation and application of the ten-key adding machines, full keyboard adding machines, and calculator.

#### **BUS 183—TERMINOLOGY AND VOCABULARY**

To develop an understanding of the terminology and vocabulary appropriate to the course of study, as it is used in business, technical, and professional offices.

### **Fourth Quarter**

#### **ENG 204—ENGLISH IV**

A study of basic concepts and principles of oral communications to enable the student to communicate with others. Emphasis is placed on the speaker's attitude, improving diction, voice, and the application of particular techniques of theory to correct speaking habits and to produce effective oral presentation. Particular attention given to conducting meetings, conferences, and interviews. Prerequisite: ENG 102.

#### **BUS 120—ACCOUNTING**

Principles, techniques and tools of accounting, for understanding of the mechanics of accounting. Collecting, summarizing, analyzing and reporting information about service and mercantile enterprises, to include practical application of the principles learned. Prerequisite: MAT 110.

#### **BUS 206—DICTATION AND TRANSCRIPTION**

Develops the skill of taking dictation and of transcribing at the typewriter materials appropriate to the course of study, which includes a review of the theory and the dictation of familiar and unfamiliar material at varying rates of speed. Minimum dictation rate of 100 words per minute required for five full minutes. Prerequisite: BUS 108.

#### **BUS 205—ADVANCED TYPEWRITING**

Emphasis is placed on the development of individual production rates. The student learns the techniques needed in planning and in typing projects that closely approximate the work appropriate to the field of study. These projects include review of letter forms, methods of duplication, statistical tabulation, and the typing of reports, manuscripts, and legal documents. Prerequisite: BUS 104. Speed requirements 50 words per minute.

#### **BUS 211—OFFICE MACHINES**

Instructions in the operation of the bookkeeping-accounting machines, continued duplicating equipment, and the dictation and transcribing machines. Practice in increasing speed and efficient utilization of office machines. Prerequisite: BUS 110.

### **Fifth Quarter**

#### **BUS 207—Dictation and Transcription**

Covering materials appropriate to the course of study, the student develops the accuracy, speed and vocabulary that will enable her to meet the stenographic requirements of business and professional offices. Minimum dictation rate of 110 words per minute. Prerequisite: BUS 206.

#### **BUS 112—FILING**

Fundamentals of indexing and filing, combining theory and practice by the use of miniature letters, filing boxes and guides. Alphabetic, Triple Check, Automatic, Geographic, Subject, Soundex and Dewey Decimal filing.

#### **SSC 201—SOCIAL SCIENCE**

An integrated course in the social sciences drawing from the fields of

anthropology, psychology, history, and sociology.

**PSY 112—PERSONALITY DEVELOPMENT**

Designed to help the student recognize the importance of the physical, intellectual, social, and emotional dimensions of personality. Emphasis is placed on grooming and methods of personality improvement.

**BUS 121—ACCOUNTING**

Partnership and corporation accounting including a study of payrolls, federal and state taxes. Emphasis is placed on the recording summarizing and interpreting data for management control rather than on bookkeeping skills. Accounting services are shown as they contribute to the recognition and solution of management problems. Prerequisite: BUS 120.

**Sixth Quarter**

**ENG 205—ENGLISH V**

A communications course designed for secretarial students who must learn to initiate written documents for the employer. Primary emphasis is placed upon the development of skills in the techniques of writing business letters, such as credit and collections, complaints, orders, acknowledgments, remittances, inquiries and answers to inquiries. The student will also learn to write business reports based upon the accumulation of primary data and to summarize business conferences. Prerequisite: ENG 204.

**BUS 214—SECRETARIAL PROCEDURES**

Designed to acquaint the student with the responsibilities encountered by a secretary during the work day. These include the following: receptionist duties, handling the mail, telephone techniques, travel information, telegrams, office records, purchasing of supplies, office organization, and insurance claims.

**BUS 208—DICTATION AND TRANSCRIPTION**

Principally a speed building course, covering materials appropriate to the course of study, with emphasis on speed as well as accuracy. Minimum dictation rate of 120 words per minute. Prerequisite: BUS 207.

**BUS 271—OFFICE MANAGEMENT**

Presents the fundamental principles of office management. Emphasis on the role of office management including its functions, office automation, planning, controlling, organizing and actuating office problems.

**EDP 104—INTRODUCTION TO DATA PROCESSING SYSTEMS**

Fundamental concepts and operational processing systems, as an aid in developing a basic knowledge of computers, prerequisite to the detail study of particular computer problems.

**Seventh Quarter**

**BUS 215E—OFFICE APPLICATIONS**

The students are assigned to work in a business, technical, or professional office for 30 hours per week. The objective is to provide actual work experience (in a minimum of two different offices) for secretarial students and an opportunity for the practical application of the skills and knowledge previously learned. Prerequisite: All course requirements completed or by approval of department head.

**First Quarter Elective**

**PSY 102—GENERAL PSYCHOLOGY**

A study of the various field of psychology; the developmental process; motivation; emotion, frustration and adjustment, mental health, attention and perception; problems of group living. Attention is given to applications of these topics to problems of study, self-understanding and adjustment to the demands of society.

**BUS 102L—BUSINESS LAB**

Laboratory practice in an office of a faculty member.

**Second Quarter Elective**

**BUS 103L—BUSINESS LAB**

Laboratory practice in a departmental or administrative office.



# COMMERCIAL ART AND ADVERTISING DESIGN

This curriculum will prepare a graduate with a sound, well-rounded background for technical and creative achievement throughout his professional life. Design and illustration for commerce is continually advancing its standards; therefore, the background offered the student must be well-developed to prepare him for performance on a contemporary professional level. Graduates of this program will have an adequate background in illustration, layout and lettering, design, and production.

Equipped with professional competence and the potential for continuing growth and improvement, graduates are qualified for employment in most fields of commercial art.

## Occupational Opportunities

The commercial artist or advertising designer creates and designs layouts and illustrations for printing, creates posters, signboards, billboards, and show cards. He may design and prepare charts, diagrams, sketches, and maps for publication and exhibition, perform responsible illustrative work for package design, photography, lettering, and art work for the printing processes. Opportunities for graduates of this program may be in advertising agencies, newspapers and magazines, television studios, industrial advertising departments and design studios, department stores, government agencies, or in printing and publishing houses.

First Quarter			Class	Lab	Hours Credit
ENG	100	English I	3	2	4
EDU	101	Educational Orientation	1	0	1
DFT	101	Technical Drafting	0	5	2
CAT	101	Advertising Principles	3	0	3
CAT	105	Life Study	2	3	3
CAT	121	Commercial Art and Advertising Design	3	9	6
			12	19	19
Second Quarter					
ENG	101	English II	3	2	4
BUS	101	Introduction to Business	5	0	5
DFT	102	Technical Drafting	0	5	2
CAT	106	Life Study	0	6	2
CAT	122	Commercial Art and Advertising Design	3	9	6
			11	22	19
Third Quarter					
ENG	102	English III	3	2	4
CAT	110	General Illustration	2	6	4
CAT	116	Photography	2	6	4
CAT	123	Commercial Art and Advertising	3	9	6
			10	23	18
Fourth Quarter					
ENG	204	English IV	3	0	3
CAT	205	Advertising Copywriting	3	2	4
CAT	212	Industrial Art and Design	1	3	2
CAT	224	Commercial Art and Advertising	3	9	6
CAT	206	Project Seminar	1	6	3
			11	20	18

### Fifth Quarter

BUS	243	Advertising	3	2	4
CAT	225	Commercial Art	4	12	8
CAT	217	Photography	2	6	4
CAT	231	Project Seminar	1	6	3
			10	26	19

### Sixth Quarter

ECO	100	Applied Economics	3	2	4
CAT	226	Commercial Art & Advertising Design	4	12	8
CAT	235	Advertising Art Direction	5	0	5
CAT	232	Project Seminar	1	6	3
			13	20	20

## COMMERCIAL ART AND ADVERTISING DESIGN

### Course Descriptions by Quarters

#### First Quarter

##### ENG 100—ENGLISH I

A sincere effort to encourage the student's development of reading comprehension and reading rate. Emphasizing the grasp of basic ideas rather than words. To have a storehouse of workable techniques which the student may use in reading assignments. Thus, helping him to identify, interpret and evaluate ideas. With purposeful practice and adequate motivation, the student's achievement will improve.

##### EDU 101—EDUCATIONAL ORIENTATION

Designed to aid the student in the understanding of the technical institute. Faculty and staff members explain the various functions of the institute. Exercises in developing study habits, writing and research techniques are completed by the students.

##### DFT 101—TECHNICAL DRAFTING

The field of drafting is introduced as the student begins study of drawing principles and practices for print reading and describing objects in the graphic language. Basic skills and techniques of drafting included are use of drafting equipment, lettering, freehand orthographic and pictorial sketching, geometric construction, orthographic instrument drawing of principal views, and standards and practices of dimensioning. The principles of isometric, oblique and perspective are introduced.

##### CAT 101—ADVERTISING PRINCIPLES

A comprehensive survey of the history and development of advertising including a discussion of its economic and social values. An introduction to advertising media and current publications in the field.

##### CAT 105—LIFE STUDY

Basic drawing in charcoal from the live model with emphasis on proportions, bone structure, muscles and main body masses.

##### CAT 121—COMMERCIAL ART AND ADVERTISING DESIGN

Basic design fundamentals. Emphasis is on form, line, dimension and composition. The relation of nature and fine art to commercial art and design. Basic lettering form and style. Rough and finished lettering techniques.

#### Second Quarter

##### ENG 101—ENGLISH II

Designed to aid the student in the improvement of self-expression in grammar. The approach is functional with emphasis on grammar, diction, sentence structure, punctuation, and spelling. Intended to stimulate students in applying the basic principles of English grammar in their day-to-day situations in industry and social life. Prerequisite: ENG 100.

### **BUS 101—INTRODUCTION TO BUSINESS**

A survey of the business world with particular attention devoted to the structure of the various types of business organizations, methods of financing, internal organization, and management.

### **DFT 102—TECHNICAL DRAFTING**

The application of orthographic projection principles to the more complex drafting problems, primary and secondary auxiliary views, simple and successive revolutions, and sections and conventions will be studied. Most important is the introduction of the graphic analysis of space problems. Problems of practical design elements involving points, lines, planes, and a combination of these elements shall be studied. Dimensioning practices for "details" and working drawings approval by the American Standards Association will also be included. Introduction is given to intersections and developments of various types of geometric objects. Prerequisite: DFT 101.

### **CAT 106—LIFE STUDY**

A continuation and application of basic life study. Action and motion of figure, study of character, expression and the draped figure. Introducing various drawing techniques such as pen and ink, wash, pastels and paint. Prerequisite: CAT 105.

### **CAT 122—COMMERCIAL ART AND ADVERTISING DESIGN**

Basic design fundamentals. Emphasis is on form, line, dimension and composition. The relation of nature and fine art to commercial art and design. Basic lettering form and style. Rough and finished lettering techniques. Prerequisite: CAT 121.

## **Third Quarter**

### **ENG 102—ENGLISH III**

Designed to aid the student in the improvement of self-expression in business and technical composition. Emphasis is on the sentence, paragraph and whole composition. Prerequisite: ENG 101.

### **CAT 110—GENERAL ILLUSTRATION**

Study of creative methods and rendering techniques used in the illustration field. Editorial illustration, advertising spots, cartooning, fashion and retail product. Black and white and color problems will be assigned, using various media and materials. Emphasis on good drawing and research.

### **CAT 116—PHOTOGRAPHY**

An introduction to the field of photography, photographic equipment and materials. A study of the fundamental techniques of the camera and its expressive possibilities in relation to the field of design and visual communications. Assigned camera projects, darkroom procedures and equipment.

### **CAT 123—COMMERCIAL ART AND ADVERTISING DESIGN**

Professional approach to advertising and editorial layout. The indicating of finished art concepts, visuals, and ideas. Pencil roughs, colored sketches and comprehensive layouts. Prerequisites: CAT 122, DFT 102.

## **Fourth Quarter**

### **ENG 204—ENGLISH IV**

A study of the basic concepts and principles of oral communications to enable the student to communicate with others. Emphasis is placed on the speaker's attitude, improving diction, voice, and the application of particular techniques of theory to correct speaking habits and to produce effective oral presentation. Particular attention given to conducting meetings, conferences and interviews. Prerequisite: ENG 102.

### **CAT 205—ADVERTISING COPYWRITING**

A study of the techniques used in creating effective advertising copy for various types of media; purposes and duties of the copywriting and legal

problems encountered in copywriting. Theory and practice will be given in writing copy for the various media including retail and fashion copy, mail order, direct mail, business, publications, radio and television.

#### **CAT 212—INDUSTRIAL ART AND DESIGN**

A study of art and design for industry and business. Forms, charts and graphs, letterhead, trademarks and company publications. Use of the airbrush, photo retouching and airbrush art. Handling of annual reports. Prerequisite: CAT 123.

#### **CAT 224—COMMERCIAL ART AND ADVERTISING DESIGN**

A thorough background in production methods for various media. Study of printing and engraving processes. Color separation process. Assignments in art mechanicals, reproduction methods and printing paper qualities and selection. Trips to printing, engraving and paper plants. Prerequisite: CAT 123.

#### **CAT 206—PROJECT SEMINAR**

Each student selects and pursues project work in the field of his choice. Maximum individual attention is available.

### **Fifth Quarter**

#### **BUS 243—ADVERTISING**

The role of advertising in a free economy and its place in the media of mass communications. A study of advertising appeals, product and market research, selection of media, means of testing effectiveness of advertising. Theory and practice of writing advertising copy for various media.

#### **CAT 225—COMMERCIAL ART**

First phase of a course providing simulated professional working conditions. The student will utilize all previous instruction "job" assignments. Work will start the students individual portfolio of professional samples. There will be class critique and discussion of assignments and solutions.

#### **CAT 217—PHOTOGRAPHY**

Advanced photographic techniques and materials. Participation in studio and laboratory procedures illustrating the various applications and creating possibilities of photography in advertising. Prerequisite: CAT 116.

#### **CAT 231—PROJECT SEMINAR**

Each student selects and pursues project work in the field of his choice. Maximum individual attention is available.

### **Sixth Quarter**

#### **ECO 100—APPLIED ECONOMICS**

A practical course in applied economics as it relates to man and his efforts to make a living. These economic endeavors will include forms of money, kinds of wages, uses of purchasing power, basic types of insurance, the importance of the effects of the business cycle, and the relationship of value to price based on the laws of supply and demand.

#### **CAT 226—COMMERCIAL ART AND ADVERTISING DESIGN**

Second phase of course providing simulated professional working conditions. Advanced "job" problems. Emphasis on self expression and originality. The student will complete his professional portfolio. Prerequisite: CAT 225.

#### **CAT 235—ADVERTISING ART DIRECTION**

A study of the art director's profession. The creating and coordinating of effective advertising campaigns and editorial designs for both national and local markets. The practical considerations, procedures and job opportunities restrictions. Media selection, frequency of insertion, direct mail and response. The value of market research. Emphasis on dealing with professionals in related fields.

#### **CAT 232—PROJECT SEMINAR**

Individual attention is given each student in the areas of learning which need strengthening. Project development is stressed.



# DEPARTMENT OF GENERAL EDUCATION

## ASSOCIATE DEGREE IN GENERAL EDUCATION DEVELOPMENTAL STUDIES SPECIAL SERVICES

### ASSOCIATE IN GENERAL EDUCATION DEGREE

Thomas Jefferson stated: "If a nation expects to be ignorant and free, in a state of civilization, it expects what never was and never will be." Since Jefferson's time our civilization has become increasingly democratic and complex. Knowledge in the broad fields of literature, the arts, philosophy, history and science has also expanded. Citizens in all walks of life must become increasingly aware not only of the complex workings and interrelationships of our institutions but also of our cultural heritage and history.

As our industrial and societal needs have developed, the requirements in the various professions have forced the education of such persons to be drawn out over a longer period of time. Technical advances also have demanded more intensive training in this complex area of knowledge and skills. A large number of citizens, however, fall clearly into neither professional nor technical categories. These people constitute the majority of citizens whose occupational activities and interests demand a high degree of literacy and some special training but whose educational goals are neither professional nor highly technical. They are the managers of small independent businesses; the department managers of larger concerns; some employees of local, state and federal government; the housewives desiring to keep abreast of their husbands' expanding knowledge and interests; young women in general; and any who have a thirst for a wider and deeper insight into life and the workings of our society.

The general education program offered at Southwestern Technical Institute is designed for the student who is basically interested in two years of education beyond the high school. This program provides a basic core of course work in the following areas:

English and Literature	18 quarter hours
Fine Arts and Philosophy	9 quarter hours
Social Science	15 quarter hours
Science and Mathematics	18 quarter hours

This introduction into the broad fields of knowledge permits the student to find himself and clarify his life goals. With this background he is able to intelligently choose additional course work in terms of his own interests and social needs. The program provides a wide choice of electives and permits the student to explore areas of interest uninhibited by specific professional or technical requirements. Beyond the basic general education, the student's program is flexible to the impulse and variety of human needs. He may explore courses in building construction, interior design, Boolean algebra, great books, home and family living, some of the introductory professional courses, or something in arts and crafts.

The program is principally designed for students wanting only two years of higher education; however, many of the required and elective courses in the program are the equivalent of regular freshman and sophomore work.

When the student has completed basic general education requirements and accumulated additional satisfactory work to a total of 96 quarter hours, he will be granted an Associate in General Education Degree.

# ASSOCIATE IN GENERAL EDUCATION PROGRAM

Year	English	Social Science	Natural Science and Mathematics	Humanities	Electives	Quarter
Fresh.	ENG 111 English	HIS 101 World Civ.	NSC 101 Physical Sci.	MUS 101 Mus. Appr.		1
	ENG 112 English	HIS 102 World Civ.	MTH 101 Modern Math	ART 101 Art Appr.		2
	Eng. Mstpcs.*					3
	ENG 113 Soc. Sci.	HIS 103 World Civ.*	MTH 102 Intro to Logic	PSY 101 Intro. to Psychology		4
	Eng. Mstpcs.*					5
	ENG 211 Nat. Sci.		BIO 201 Gen. Zoology*			6
Soph.	Eng. Mstpcs.*					
	ENG 212 Humanities		BIO 202 Gen. Botany	PHI 202 Intro. to Phil.*		
	Creative					
	ENG 213 Writing			PHI 203 Cont. Issues		

\*Indicates Co-requisite Course.

	FIRST YEAR			Total
	General Education Credit Hours	Elective Credit Hours		Credit Hours
First Quarter	12	4		16
Second Quarter	12	4		16
Third Quarter	12	4		16
	SECOND YEAR			
Fourth Quarter	7	9		16
Fifth Quarter	10	6		16
Sixth Quarter	6	10		16
TOTALS	59	37		96

## Course Description by Quarters

### First Quarter

#### ENG 111—ENGLISH

3 hours

A brief history of the English language and review of grammar with particular emphasis on composition and expository writing.

#### HIS 101—WORLD CIVILIZATION

3 hours

A survey of the cultural beginnings of Eastern and Western civilizations, dealing with migrations, cultural diffusion, and the development of governmental and ethical structures through the fall of the Roman Empire.

#### NSC 101—PHYSICAL SCIENCE

3 hours

A study of facts, principles, theories and basic concepts from the areas of astronomy, geology and climatology. Special emphasis will be given to evaluation of landscapes, effects of glaciers, streams, wind, weather, and the geological timetable.

#### MUS 101—MUSIC APPRECIATION

3 hours

Designed to give a basic orientation to music with emphasis on simple form and analysis, instrumentation, aesthetics, masterpieces and other significant works.

Elective

4 hours

### Second Quarter

#### ENG 112—ENGLISH

3 hours

A continuation of ENG 101 with special emphasis on reading, expository writing and speaking, with an introduction to poetry and the short story.

#### HIS 102—WORLD CIVILIZATION

3 hours

A continuation of HIS 101 from the Middle Ages, through the Renaissance, the Voyages of Discovery, Colonization, the Reformation, and the Age of Enlightenment.

#### MTH 101—MODERN MATHEMATICS

3 hours

An introduction to mathematical concepts necessary for effective citizenship. The course includes sets, the development of number systems, an introduction to probability, algebra and statistics.

#### ART 101—ART APPRECIATION

3 hours

An introduction to fundamental elements and principles of creative art expression emphasizing composition, design, shape, value, styles, and movements.

Elective

4 hours

### Third Quarter

#### ENG 113—ENGLISH MASTERPIECES IN THE SOCIAL SCIENCES

3 hours

A continuation of ENG 111 and ENG 112 introducing the novel and with increased emphasis on writing and speaking on topics related to contemporary social problems. (Co-requisite with HIS 103)

#### HIS 103—WORLD CIVILIZATION

3 hours

A continuation beginning with the Industrial Revolution, the impact of industrial imperialism, the American and French Revolution, the rise of political democracy and modern nationalism to the present. (Co-requisite with ENG 103)

#### MTH 102—INTRODUCTION TO LOGIC

3 hours

Emphasis on both inductive and deductive logic with particular attention to the bases of scientific evidence, probability theory, hypothetical and categorical syllogisms, causation and common fallacies.

#### PSY 101—INTRODUCTION TO PSYCHOLOGY

3 hours

Introductory survey of the field of psychology wherein the student becomes better acquainted with a human being as a biological-social organism. Topics covered include history of psychological development, the scientific method in psychology, theory of statistical concepts, intelligence, motivation, emotions and learning.

Elective

4 hours

### Fourth Quarter

#### ENG 211—ENGLISH MASTERPIECES IN THE NATURAL SCIENCES

3 hours

A continuation, introducing the essay and with emphasis on writing and speaking on topics related to man in his biological and physical environment. (Co-requisite with BIO 201)

**BIO 201—GENERAL ZOOLOGY** 4 hours  
A comprehensive study of the animal kingdom, with special emphasis on the morphology, anatomy, physiology, genetics and ecological relationships. (Co-requisite with ENG 201)

Electives 9 hours

#### **Fifth Quarter**

**ENG 212—ENGLISH MASTERPIECES IN THE HUMANITIES** 3 hours  
A continuation drawing from all literary forms with emphasis on expository writing and speaking on man and philosophy. (Co-requisite with PHI 202)

**BIO 202—GENERAL BOTANY** 4 hours  
A comprehensive study of the plant kingdom with special emphasis on morphology, anatomy, physiology, taxonomy and ecology.

**PHI 202—INTRODUCTION TO PHILOSOPHY** 3 hours  
An introduction to philosophic world frames emphasizing cosmology, ontology, epistemology, and axiology. (Co-requisite with ENG 202)

Electives 6 hours

#### **Sixth Quarter**

**ENG 213—CREATIVE WRITING** 3 hours  
Creative writing laboratory. Emphasis on imaginative writing with special emphasis on essays, short stories, and poetry.

**PHI 203—CONTEMPORARY ISSUES** 3 hours  
A culminating interdisciplinary course dealing with the basic economic, social, scientific and moral issues confronting human society.

Electives 10 hours

## **DEVELOPMENTAL STUDIES**

### **Purpose**

The Developmental Program is a series of courses designed for students who at their present educational level cannot enter regular curriculum courses or who have not completed their high school education. This program gives every person the opportunity of reentering school and meeting requirements of the world of work and of further education. The courses are structured to meet individual needs, and placement of a student in a course of studies depends upon the person's level of achievement when he registers for the course. Emphasis is placed on reading, math, and English. The student may select other electives which he may need to meet his particular objective. The program meets the needs of the following persons:

1. Those who do not have a high school diploma
2. Those who have entered a curriculum and who are experiencing difficulties
3. Those who need extra preparation before entering a particular curriculum
4. Those who have handicaps which may have prevented them from attending regular school

### **Specific Objectives**

1. To help students make such academic progress that he can make an acceptable score on the GED
2. To encourage students to develop study skills, test taking proficiencies and to give him a general idea of what will be expected of him in the world of work



3. To enable a student to assess his actual potential so that he can make wise vocational choices
4. To provide individual instruction and tutoring for any student in the program who has specific problems not common to the whole class and such reinforcement for students who have already completed the program

### **Program of Studies**

#### **PRE-TECHNICAL T-099**

A program of studies based on the needs of particular students in areas of deficiencies. Structured to bring up these specific areas so that a student may succeed in a technical curriculum.

#### **PRE-VOCATIONAL V-099**

Basic courses structured to meet the needs of students preparing to enter a vocational curriculum.

#### **HIGH SCHOOL EQUIVALENCY GED-099**

A program of studies outlined for students who have not received a high school diploma. A student may enter the program at any time during a quarter. After he is tested, a sequence of courses is outlined so that a student may work toward a level of achievement which will enable him to make a passing score on the GED.

The Developmental Studies Program is open from 8:00 A.M. until 4:00 P.M. Monday through Friday and from 6:00 P.M. until 10:00 P.M. Monday through Thursday. A student may register for as many hours as his time allows. Veterans may receive benefits for full time or part-time work.

## **SPECIAL SERVICES**

### **Operation Handi**

Operation Handi is a program designed to attract and assist students who have a physical handicap or who have a personal situation that would put them at a disadvantage in getting the vocational training they want.

The Operation Handi staff looks for students who want vocational training but feel that they do not qualify or would not be able to fit into the training or the Institute. The program assists these students in enrolling at Southwestern Technical Institute, and in finding financial, medical, and social support while they are enrolled. The staff of Operation Handi works with the other staff and instructors of Southwestern Technical Institute in planning and adapting the institute's training to the handicapped or disadvantaged person's individual working speed and ability. If the technical institute is not able to provide for the training needs of an applicant, the staff will work with the applicant to find a training situation that can meet his needs.

### **Mobil Classroom**

Operation Handi also operates a mobil classroom designed to take the technical institute to communities that are isolated from the campus by distance and bad roads. The classroom is designed for a variety of short courses that are suitable for its limited space. Use of the classroom is limited to those communities that find it difficult to come to the campus of Southwestern Technical Institute.

For further information on Operation Handi at Southwestern Technical Institute or the mobil classroom, contact the Operation Handi office.

# DEPARTMENT OF HUMAN SERVICES

## CHILD CARE WORKER

## COSMETOLOGY

## EARLY CHILDHOOD SPECIALIST

## ENVIRONMENTAL TECHNOLOGY

## PRACTICAL NURSE EDUCATION

## RECREATION TECHNOLOGY

### CHILD CARE WORKER

The child care worker assists professional personnel in implementing a planned program of activities. This requires understanding of a wide variety of activities: how to prepare materials, how to assist children to participate and how to care for materials at the completion of an activity. The worker must be able to perform these functions and carry out routine procedures while continuously observing the children and relating to each according to his needs.

Graduates of this basic course may find employment in day care centers, nursery schools, kindergartens, child development centers, hospitals, institutions, camps, and recreation centers. With appropriate in-service training, graduates could be prepared to assist professional personnel in centers for children with developmental handicaps — the emotionally disturbed, the retarded, or the physically disabled.

First Quarter		Class	Lab	Hours Credit
EDU 1001	The Nature and Scope of Day Care for Young Children	5	0	5
EDU 1002	Health and Safety of Young Children	5	0	5
EDU 1003	Creative Activities for Young Children	5	3	6
EDU 1004	Field Experience in Child Care Facilities		6	2
ECO 1000	Applied Economics	3	0	3
		18	9	21
Second Quarter				
EDU 1005	Working with the Young Child	3	9	6
EDU 1006	Communicating Effectively with the Young Child	3	0	3
EDU 1007	Music in the Early Childhood Program	2	3	3
EDU 1008	Science in the Early Childhood Program	2	3	3
EDU 1009	Art in the Early Childhood Program	2	3	3
		12	18	18
Third Quarter				
EDU 1010	Working with the Young Child with Problems	3	9	6
EDU 1011	Conceptual and Language Development	3	0	3
EDU 1012	Literature in the Early Childhood Program	3	0	3
EDU 1013	Parent Education**	3	0	3
EDU 1014	Administration and Supervision in A Preschool Facility**	3	0	3
EDU 1015	Group Care of Infants**	3	0	3
		15	9	18
TOTAL QUARTER HOURS				57

\*\*Student to select two.

# CHILD CARE WORKER

## Course Descriptions by Quarters

### First Quarter

#### EDU 1001—THE NATURE AND SCOPE OF DAY CARE FOR YOUNG CHILDREN

Designed to promote understanding of the role and responsibilities of day care workers. Classroom activities include study of personal adjustment, the developmental sequence in infancy and childhood, and needs of young children for optimal intellectual, emotional, and social development. The importance of the adult-child relationship is emphasized throughout the course.

#### EDU 1002—HEALTH AND SAFETY OF YOUNG CHILDREN

Designed to promote understanding of factors which influence physical and emotional health during infancy and childhood. Classroom activities focus on practices and procedures for promoting good health among children in group care. The influence of child care workers on health and safety and on the teaching of health habits is emphasized throughout the course.

#### EDU 1003—CREATIVE ACTIVITIES FOR YOUNG CHILDREN

Designed to promote appreciation for the importance of a varied program of activities for young children and to develop understanding of types of activities which should be provided in a group care facility. Classroom activities include discussion of media and techniques, experimentation with various media, and participation in planning activity programs for different age groups.

#### EDU 1004—FIELD EXPERIENCE IN CHILD CARE FACILITIES

Designed to provide opportunities for students to apply classroom learnings to observation of young children and to participate in their care under the supervision of the teacher. Experience in various types of child care facilities will be related to classroom learnings through assignments, group discussions, and conferences. This course is intended to indicate the experiences needed to reinforce learnings of EDU 1001, EDU 1002, and EDU 1003. Satisfactory performance in EDU 1004 is required for completion of the basic pre-employment course for child care workers.

#### ECO 1000—APPLIED ECONOMICS

Designed to help the student understand present-day economics problems. Topics include: production, consumption, exchange and distribution, money and credit, business fluctuations, labor and management relations, and challenges to our system of free enterprise.

### Second Quarter

#### EDU 1005—WORKING WITH THE YOUNG CHILD

An introduction to the relationships of developmental stages to behavior patterns, with emphasis on those methods of interacting with children which promote healthy progress from one developmental stage to the next. Discussions and assignments are designed to develop insight into the student's own attitudes and biases, as a basis for self-understanding and increased capacity for relating to children and adults effectively. Prerequisite: EDU 1001.

#### EDU 1006—COMMUNICATING EFFECTIVELY WITH THE YOUNG CHILD

Study of language developments in relation to adult models and the child's early experiences. Remedial approaches to improving the student's oral communication, in order to serve as an effective model. Case studies provide opportunities to analyze problems of adult-child communication and to derive guidelines for establishing effective communication patterns with young children. Prerequisite: EDU 1001.

#### EDU 1007—MUSIC IN THE EARLY CHILDHOOD PROGRAM

Study of music which is appropriate for young children and ways of integrating music into the total program of activities. Students learn to utilize a wide variety of materials for rhythm, instrumental performance, and dramatic play. Laboratory sessions provide opportunities for learning songs and developing extensive files; field experience provides op-

portunities to participate in and evaluate music activities for various age groups. Prerequisite: EDU 1003.

#### **EDU 1008—SCIENCE IN THE EARLY CHILDHOOD PROGRAM**

Study of those scientific facts, concepts, and phenomena that are of interest to young children. Laboratory experiences provide opportunities to carry out simple experiments in which young children could participate. Each student will plan a science program which could be used as an integral component of the overall program for young children in group care.

Prerequisite: EDU 1003.

#### **EDU 1009—ART IN THE EARLY CHILDHOOD PROGRAM**

Study of art media in relation to the creative process in young children, of the educational component that each medium reinforces, and of the ways a variety of low-cost art activities can be incorporated into a program for young children. Laboratory sessions provide first-hand experience with all of the media, opportunities to explore the uses of each, and practice in the care and storage of materials. Each student will plan a meaningful sequence of art activities which could be incorporated into a program for young children. Prerequisite: EDU 1003.

### **Third Quarter**

#### **EDU 1010—WORKING WITH THE YOUNG CHILD WITH PROBLEMS**

Further study of behavior in relation to developmental stages, with emphasis on behavior which is symptomatic of emotional or physical handicaps. Case studies and field observations are utilized for analysis of problems commonly encountered in group situations. Effective interaction and other types of remedial help are explored. Behavior of the child care worker is analyzed as a possible factor in contributing to or alleviating of mal-adjustment, with focus on the importance of constructively utilizing an analytic approach to self-development and to improved interpersonal skills. Prerequisite: EDU 1005.

#### **EDU 1011—CONCEPTUAL AND LANGUAGE DEVELOPMENT**

Study of means for helping children develop in their ability to communicate and to formulate concepts about their environment. Emphasis is on utilization of all facets of the program to reinforce concept development and to increase vocabulary through stimulation of oral communication. Reading assignments and recordings of children's speech provide opportunities to study speech development, to establish realistic expectations and to identify children with needs for special attention to language development. Prerequisite: EDU 1006.

#### **EDU 1012—LITERATURE IN THE EARLY CHILDHOOD PROGRAM**

Study of literature for young children, with emphasis on criteria for evaluating the literary value of children's books. Extensive reading and development of a topical file provide resources for selection of appropriate materials to use in field practice, to develop skill in oral reading and in story telling. Prerequisite: EDU 1006.

#### **EDU 1013—PARENT EDUCATION**

Designed to develop understanding of the rewards and difficulties of parents. Role playing provides opportunities to practice ways of working with parents through home visits, individual conferences, informal conversations and group meetings. The relationship of the child care facility to other community agencies is explored, including ways each can best serve children and their families. Emphasis is given to the responsibility of child care workers to know about community resources, to be sensitive to needs of parents, and to help parents become aware of and utilize services of the community. Prerequisite: EDU 1001.

#### **EDU 1014—ADMINISTRATION AND SUPERVISION IN A PRE-SCHOOL FACILITY**

Designed to assist students to develop a philosophy of preschool education which can serve as a guide in establishing policies and procedures for the operation of a center for group care of young children. Emphasis is given to principles of supervision and techniques for promoting acceptance of a philosophy by the total staff. Prerequisite: EDU 1001.

#### **EDU 1015—GROUP CARE OF INFANTS**

Study of development from birth to age three and of the problems specific to group care of children under three. Each student will develop a plan



of care for a group of five children; the plan must reflect concern for the child's total development and show procedures for dealing with the practical problems of providing safe care for infants and toddlers. Prerequisites: EDU 1001 and EDU 1002.

## COSMETOLOGY

This curriculum is approved by the North Carolina State Board of Cosmetic Art Examiners.

The student must complete a minimum of 1200 contact hours of instruction. After successfully completing this requirement, a student must apply to the State Board of Cosmetic Art Examiners for examination. Successful candidates will receive their North Carolina license in Cosmetology. The licensed Cosmetologist is in great demand throughout the United States. Many newly licensed Cosmetologists join the staffs of beauty salons while others open their own shops or form partnerships.

First Quarter	Class	Lab	Contact Hours	Credit
COS 1001 Cosmetology I			330	20
Second Quarter				
COS 1002 Cosmetology II			363	21
Third Quarter				
COS 1003 Cosmetology III			330	21
Fourth Quarter				
COS 1004 Cosmetology IV			330	21
TOTAL QUARTER HOURS.....				83
				Contact Hours: 1353

## COSMETOLOGY

### Course Descriptions by Quarters

#### First Quarter

##### COS 1001—COSMETOLOGY I

The simplified theories, procedures and techniques of fingerwaving, hair-styling, haircoloring, bleaching, permanent waving, haircutting, manicuring, wig and hairpiece styling and care. The course includes a study of bacteriology, methods of sterilization of equipment and personality development.

#### Second Quarter

##### COS 1002—COSMETOLOGY II

This course includes advanced theories and practices studied in Cosmetology I as well as operational management, first aid, and facials.

#### Third Quarter

##### COS 1003—COSMETOLOGY III

Cosmetology I and II advanced into the third level to include small business management and cosmetic chemistry.

#### Fourth Quarter

##### COS IV—COSMETOLOGY IV

Cosmetology I, II, and III advanced into the fourth level to include thermal waving and curling. The study of human relations is also included on this level.

## EARLY CHILDHOOD SPECIALIST

Early childhood specialists provide infants and young children a program which will promote the optimal development of each child. The specialist must understand and be able to (1) meet the physical and nutritional needs of preschool children; (2) provide activities which stimulate intel-

lectual, emotional, and social growth of children; (3) guide children in the formation of acceptable habits and attitudes; and (4) assist children in their learning to communicate effectively with others.

The early childhood specialist may choose to work with exceptional children as an aide to the kindergarten teacher or to organize and operate a child care facility as a private enterprise.

First Quarter			Class	Lab	Hours Credit
ENG	100	English I	3	2	4
PSY	104	The Dynamics of Human Behavior	3	2	4
SOC	104	The Family: A Cross-Cultural Survey	3	0	3
EDU	101	Child Growth and Development	3	0	3
SCI	101	General Science	3	4	5
			<hr/> 15	<hr/> 8	<hr/> 19

#### Second Quarter

ENG	101	English II	3	2	4
PSY	105	Human Growth and Development: Prenatal and Infant	3	0	3
SOC	105	Families in the American Culture	3	0	3
EDU	102	Programming for Young Children	3	6	5
NUT	102	Nutrition for Young Children	2	3	3
			<hr/> 14	<hr/> 11	<hr/> 18

#### Third Quarter

ENG	102	English III	3	2	4
PSY	106	Human Growth and Development: Early Childhood	3	0	3
SOC	106	The Family in the Community	3	0	3
EDU	103	Working with Young Children	3	9	6
HEA	101	Personal Hygiene and Health	2	0	2
			<hr/> 14	<hr/> 11	<hr/> 18

#### Fourth Quarter

ENG	204	English IV	3	2	4
PSY	201	Human Growth and Development: Middle Childhood and Adolescence	3	0	3
EDU	201	Activities for Young Children	3	9	6
SOC	201	The Child and Community Services Elective	3	0	3
			<hr/> 15	<hr/> 11	<hr/> 19

#### Fifth Quarter

ENG	103	English V	3	0	3
PSY	202	Human Growth and Development: Adulthood	3	0	3
EDU	202	Seminar-Practicum in Early Childhood	4	12	8
EDU	203	The Exceptional Child	3	0	3
			<hr/> 13	<hr/> 12	<hr/> 17

#### Sixth Quarter

		Elective	3	0	3
EDU	204	Parent Education	3	0	3
EDU	205	Seminar-Practicum	2	15	7
EDU	207	Special Problems in Early Childhood Elective	2	0	2
			<hr/> 3	<hr/> 2	<hr/> 4
			<hr/> 13	<hr/> 17	<hr/> 19

## EARLY CHILDHOOD SPECIALIST

### Course Descriptions by Quarters

#### First Quarter

##### ENG 100—ENGLISH I

A sincere effort to encourage the student's development of reading comprehension and reading rate. Emphasizing the grasp of basic ideas rather than words. To have a storehouse of workable techniques which the student may use in reading assignments. Thus, helping him to identify, interpret and evaluate ideas. With purposeful practice and adequate motivation, the student's achievement will improve.

##### PSY 104—THE DYNAMICS OF HUMAN BEHAVIOR

Study of human behavior, with emphasis on developmental aspects, motivations, common behavioral patterns, and the role of defense mechanisms in human behavior. Laboratory experiences will demonstrate a variety of theories related to human behavior.

##### SOC 104—THE FAMILY: A CROSS-CULTURAL SURVEY

Study of the family as a social unit, with primary focus on the influence of family relationships during infancy and childhood. Historical patterns and the evolution of family roles in various types of cultures provide opportunities to analyze and interpret the influence of the culture and the family in relation to the large society.

##### EDU 101—CHILD GROWTH AND DEVELOPMENT

Study of early growth and development, with emphasis on the principles and techniques for promoting the physical and mental health of the young child.

##### SCI 101—GENERAL SCIENCE

Study of basic concepts from biological, physical, and natural sciences. Laboratory experiences provide opportunities to develop projects for demonstrating simple science concepts to young children, utilizing materials from nature and simple equipment. Each student will develop a series of projects appropriate for a specific level of development.

#### Second Quarter

##### ENG 101—ENGLISH II

Designed to aid the student in the improvement of self-expression in grammar. The approach is functional with emphasis on grammar, diction, sentence structure, punctuation, and spelling. Intended to stimulate students in applying the basic principles of English grammar in their day-to-day situations in industry and social life. Prerequisite: ENG 100.

##### PSY 105—HUMAN GROWTH AND DEVELOPMENT: PRENATAL AND INFANT

A detailed study of the developmental sequence of the prenatal and infant periods, with emphasis on developmental influences and conditions necessary for optimal development of individuals. Prerequisite: PSY 104.

##### SOC 105—FAMILIES IN THE AMERICAN CULTURE

Study of the family in the American culture, changing patterns in family roles, the influence of socio-economic status on family relationships, factors associated with cultural deprivation, and the effects on children in such families. Prerequisite: SOC 104.

##### EDU 102—PROGRAMMING FOR YOUNG CHILDREN

Study of principles and practices of early childhood education: the types of experiences, facilities, and media which will promote optimal development of each child. Guidelines for identifying, planning, organizing, and implementing appropriate programs for various levels of development are derived through group discussion and individual projects. Laboratory experience provides opportunities to participate in planning activities, in selecting equipment and materials, in defining the adult role, and in developing techniques for managing children in a group situation. Prerequisite: EDU 101.

##### NUT 102—NUTRITION FOR YOUNG CHILDREN

Study of basic nutrition, with emphasis on (1) methods of helping young children and their families learn nutritional concepts and (2) planning balanced diets for preschool children. Prerequisite: None

### **Third Quarter**

#### **ENG 102—ENGLISH III**

Designed to aid the student in the improvement of self-expression in business and technical composition. Emphasis is on the sentence, paragraph and whole composition. Prerequisite: ENG 101.

#### **PSY 106—HUMAN GROWTH AND DEVELOPMENT: EARLY CHILDHOOD**

A detailed study of the developmental sequence during the preschool period, ages 2 to 6. Emphasis is given to factors influencing development; the importance of experiences in establishing patterns of behavior, attitudes, interpersonal skills; language usage; and the relationship of early childhood to later realization of potential. Prerequisite: PSY 105.

#### **SOC 106—THE FAMILY IN THE COMMUNITY**

Study of community agencies concerned with physical and mental health in families, socio-economic problems, and education for child-rearing. Prerequisite: SOC 105.

#### **EDU 103—WORKING WITH YOUNG CHILDREN**

Case presentations, films, observations, and group discussions are utilized to study characteristic behaviors of each level of development and to derive guidelines for promoting desirable behaviors and for coping with undesirable behaviors. Laboratory experiences will provide opportunities to develop observation skills, effective techniques, and beginning skill in adapting activities to the needs of individual children. Through coordination with PSY 106, theories from behavioral science are identified as the foundation of techniques for working with young children. Prerequisite: EDU 102.

#### **HEA 101—PERSONAL HYGIENE AND HEALTH**

Study of influences on physical and mental health, individual practices which aid in maintaining good physical and mental health throughout the life span, and responsibilities of those working with young children to maintain personal health and to serve as models for health practices. Prerequisite: None

### **Fourth Quarter**

#### **ENG 204—ENGLISH IV**

A study of basic concepts and principles of oral communications to enable the student to communicate with others. Emphasis is placed on the speaker's attitude, improving diction, voice, and the application of particular techniques of theory to correct speaking habits and to produce effective oral presentation. Particular attention given to conducting meetings, conferences, and interviews. Prerequisite: ENG 102.

#### **PSY 201—HUMAN GROWTH AND DEVELOPMENT: MIDDLE CHILDHOOD AND ADOLESCENCE**

A detailed study of the developmental sequence during middle childhood and adolescence; emphasis is given to environmental and social factors which influence developmental rates, formulation of behavior patterns, and establishment of value systems and interests. Prerequisite: PSY 106.

#### **EDU 201—ACTIVITIES FOR YOUNG CHILDREN**

Individual and group exploration of activities and media for promoting optimal overall development of children, with special emphasis on music, art, science, and oral language development. Laboratory experiences provide opportunities to plan and implement a program which demonstrates the adaptability of specified activities and media to a variety of age levels. Prerequisite: EDU 103.

#### **SOC 201—THE CHILD AND COMMUNITY SERVICES**

Study of the types of facilities needed by a community concerned with the well-being of its children. Analysis of child needs which can be met through community planning, with identification of local, state, and national resources. Prerequisite: SOC 106.

### **Fifth Quarter**

#### **ENG 103—ENGLISH V**

The fundamentals of English are utilized as a background for the organization and techniques of modern report writing. Exercises in developing typical reports, using writing techniques and graphic devices are completed by the students. Practical application in the preparation of a full-length report is required of each student at the end of the term. This



report must have to do with something in his chosen curriculum. **Prerequisite:** ENG 204.

**PSY 202—HUMAN GROWTH AND DEVELOPMENT: ADULTHOOD**

A study of adulthood in terms of developmental tasks, life problems, crises, adjustment mechanisms, and problems related to intellectual, emotional, and social aspects of the individual in relation to others and to society. **Prerequisite:** PSY 201.

**EDU 202—SEMINAR-PRACTICUM IN EARLY CHILDHOOD**

Experience in a variety of child care settings to develop further skill in working with young children, in assisting with programming activities, and in adapting to the needs of individual children. Analysis of individual problems encountered in working with specific age groups. **Prerequisite:** EDU 201.

**EDU 203—THE EXCEPTIONAL CHILD**

Study of children with developmental variations requiring modification in activities. Consideration is given to recognition of problems, community resources, and appropriate activities for the child with exceptional deviations in personality or physical development. **Prerequisites:** EDU 201 and SOC 201.

**Sixth Quarter**

**EDU 204—PARENT EDUCATION**

Study of ways parents can be involved in the child development center, of the purposes and value of home visitation, and of techniques for reporting child progress to parents. The role of the early childhood specialist in aiding parents in guidance of the child's development is emphasized. Each student will develop a series of programs appropriate for presentation to the parents of preschool children. **Prerequisites:** SOC 106 and PSY 202.

**EDU 205—SEMINAR-PRACTICUM**

Seminar on child development problems. Continued experience in a variety of child care facilities. **Prerequisite:** EDU 202.

**EDU 206—SPECIAL PROBLEMS IN EARLY CHILDHOOD**

Directed study of a specialized area of early childhood, appropriate to the individual career interests of students. **Prerequisites:** EDU 202 and EDU 203.

## **SOCIAL SCIENCE ELECTIVES**

**ECO 102—ECONOMICS**

The fundamental principles of economics including the institutions and practices by which people gain a livelihood. Included is a study of the laws of supply and demand and the principles bearing upon production, exchange, distribution, and consumption both in relation to the individual enterprise and to society at large. **Prerequisite:** None

**SSC 205—AMERICAN INSTITUTIONS**

A study of the effect of American social, economic, and political institutions upon the individual as a citizen and as a worker. The course dwells upon current local, national, and global problems viewed in the light of our political and economic heritage. **Prerequisite:** None

**POL 201—UNITED STATES GOVERNMENT**

A study of government with emphasis on basic concepts, structure, power, procedures, and problems. **Prerequisite:** None

**SOC 207—RURAL SOCIETY**

A study of selected elements of rural sociology with emphasis on current social changes. The course provides a sociological background for the understanding of rural social changes. Areas of study include rural culture, group relationships, social classes, rural and suburban communities, farm organizations, the communication of agricultural technology, rural social problems, agricultural adjustment and population change. **Prerequisite:** None

**ISC 201—INDUSTRIAL ORGANIZATION AND MANAGEMENT**

Organizational structure for industrial management; operational and financial activities, including accounting, budgeting, banking, credit and industrial risk, forecasting of markets, selection and layout of physical facilities; selection, training and supervision of personnel as found in typical industrial organizations. **Prerequisite:** None

## ENVIRONMENTAL SCIENCE TECHNOLOGY

### Purpose of Curriculum

During the last few years our ever-increasing population and spiralling environmental problems have caused local, state, and national concern. Increasing pressure from the public and stricter environmental quality laws have caused industry, business and government agencies to show new interest in environmental quality. The trend is moving toward solving a wide range of environmental problems such as conserving the resources we have left and cleaning up the mess we have made.

Many broadly trained environmental science technicians will be needed to perform a wide variety of duties.

The curriculum provides the necessary balanced, broad background in environmentally oriented courses supplemented by basic courses such as English, math, government, and economics. Emphasis will be on environmental problems, overall effect of these problems on our environment, and proposed solutions to these problems. Since environmental problems are interrelated, this broad training will better qualify the student to grasp and solve environmental problems.

### Occupational Opportunities

The technician's training will qualify him for a wide range of duties such as inspections, surveys, investigations, and evaluations. His specific tasks would include water and air sampling and analysis, assisting professionals in performing environmental research, and collecting and evaluating environmental impact data. Employment opportunities exist with industry and many branches of our local, state, and federal government.

## ENVIRONMENTAL SCIENCE TECHNOLOGY

### First Quarter

			Class	Field and Lab	Hours Credit
ENG	100	English I	3	2	4
MAT	101	Technical Math	5	0	5
BIO	101	General Biology	3	4	5
ENV	100	Environmental Orientation	1	2	2
ENV	110	Pollution	2	3	3
			14	11	19

### Second Quarter

ENG	101	English II	3	2	4
CHM	101	Chemistry I	3	4	5
MAT	102	Technical Math	5	0	5
ENV	120	Renewable Resources Management	3	6	5
			14	12	19

### Third Quarter

ENG	102	English III	3	2	4
CHM	108	Industrial and Agricultural Chm	3	4	5
PHY	101	Physics	3	4	5
ENV	130	Environmental Microbiology	3	4	5
			12	14	19

**Fourth Quarter**

ENV	200	Cooperative Work Experience	40	13
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**Fifth Quarter**

ENG	204	English IV	3	0	3
ENV	210	Ecology	3	3	4
ENV	211	Water Resources Management	2	3	3
ENV	212	Air Resources Management	2	3	3
		Electives	3	2	4
			<hr/> 13	<hr/> 11	<hr/> 17

**Sixth Quarter**

POL	103	National, State, Local Government	3	0	3
ENV	220	Water Sampling and Analysis	2	6	4
ENV	221	Air Sampling and Analysis	2	6	4
ENV	222	Regional Environmental Problems	2	3	3
		Electives	3	2	4
			<hr/> 12	<hr/> 17	<hr/> 18

**Seventh Quarter**

ECO	100	Economics	3	2	4
ENV	230	Environmental Quality			
		Laws and Enforcement	3	2	4
ENV	231	Environmental Project	1	12	5
		Elective	4	0	4
			<hr/> 11	<hr/> 16	<hr/> 17

**Electives**

ENV	213	Soils Management and Erosion Control	2	3	3
ENV	214	Pesticide and Herbicide Use and Control	2	3	3
ENV	215	Conservation of Natural Resources	4	3	5
ENV	216	Multiple Use Timber Cutting	3	6	5
ENV	223	Water and Sewage Management	3	3	4
ENV	224	Industrial Waste Treatment and Recycling	3	3	4

**ENVIRONMENTAL SCIENCE TECHNOLOGY****Course Descriptions by Quarters****First Quarter****ENG 100—ENGLISH I**

A sincere effort to encourage the student's development of reading comprehension and reading rate. Emphasizing the grasp of basic ideas rather than words. To have a storehouse of workable techniques which the student may use in reading assignments. Thus, helping him to identify, interpret and evaluate ideas. With purposeful practice and adequate motivation the student's achievement will improve.

**MAT 101—TECHNICAL MATH**

An introduction to mathematical concepts necessary for effective citizenship. The course includes sets, the development of number systems, and introduction to probability, algebra and statistics.

**BIO 101—GENERAL BIOLOGY**

An introduction to the biological principles; a study of the chemical and physical properties of the living cell; selected laboratory experiments to reinforce lectures.

**ENV 100—ENVIRONMENTAL ORIENTATION**

An introduction to environmental education, fields of environmental em-

ployment, and duties performed. Guest lecturers in environmentally related fields.

#### **ENV 110—POLLUTION**

An introductory environmental course dealing with our nations overall pollution problems. This course is designed to give the student a general background before he is exposed to specialized environmental courses.

#### **Second Quarter**

##### **ENG 101—ENGLISH II**

Designed to aid the student in the improvement of self-expression in grammar. The approach is functional with emphasis on grammar, diction, sentence structure, punctuation, and spelling. Intended to stimulate students in applying the basic principles of English grammar in their day-to-day situations in industry and social life.

##### **CHM 101—CHEMISTRY I**

Study of the physical and chemical properties of substances, chemical changes, elements, compounds, gases, chemical combinations, weights and measurements; theory of metals, acids, bases, salts, solvents, solutions, and emulsions. In addition, study of carbohydrates; electrochemistry, electrolytes, and electrolysis in their application of chemistry to industry.

##### **MAT 102—TECHNICAL MATH**

A continuation of MAT 101. Advanced algebraic and trigonometric topics including quadratics, logarithms, determinants, progressions, the binomial trigonometric functions are studied in depth. Prerequisite: MAT 101.

##### **ENV 120—RENEWABLE RESOURCES MANAGEMENT**

The concepts and problems of coordinated use and management of the renewable resources: namely soil, air water, vegetation, and fauna. Field trips will be utilized to demonstrate the proper management as well as misuse of renewable resources.

#### **Third Quarter**

##### **ENG 102—ENGLISH III**

Designed to aid the student in the improvement of self-expression in business and technical composition. Emphasis is on the sentence, paragraph and whole composition. Prerequisite: ENG 101.

##### **CHM 108—INDUSTRIAL AND AGRICULTURAL CHEMISTRY**

Course dealing with the application of inorganic and organic chemistry principles to fertilizers, pesticides, herbicides and industrial wastes, testing, properties. Soil and fertilizer methods of analysis used in North Carolina and their interpretations. Prerequisite: CHM 101.

##### **PHY 101—PHYSICS**

A foundation course in general physics, treating the atomic theory of matter; properties of solids, liquids, gases; fluid in motion; Newton's Law of Motion; concepts of force, mass, weight, vector, momentum, centrifugal and centripetal forces, speed, velocity, acceleration. Laboratory experiments deals with these topics.

##### **ENV 130—ENVIRONMENTAL MICROBIOLOGY**

A study of general microbiology with emphasis on microorganisms associated with pollutants such as industrial waste and sewage. Lab will include methods of isolating, culturing, and staining selected microorganisms. Prerequisites: BIO 101 and CHM 101.

#### **Fourth Quarter**

##### **ENV 200—COOPERATIVE WORK EXPERIENCE**

This course consists of one quarter of supervised cooperative work experience with an agency or business. The objective is to provide the student, before graduation, with actual employment experience in environmentally related work. The student will be advised by the instructor and supervised by the employer. An agreement will be made with the employer as to duties to be performed by the student. The student will give a class talk concerning his work experience.

#### **Fifth Quarter**

##### **ENG 204—ENGLISH IV**

A study of basic concepts and principles of oral communications to enable the student to communicate with others. Emphasis is placed on the speaker's attitude, improving diction, voice, and the application of particu-



lar techniques of theory to correct speaking habits and to produce effective oral presentation. Particular attention given to conducting meetings, conferences, and interviews. Prerequisite: ENG 102.

#### **ENV 201—ECOLOGY**

A basic course designed to acquaint the student with the relationships between organisms and their environment, and of interactions among organisms. Lectures, laboratories and field trips present a balanced perspective in environmental biology. Included will be productivity; nutrient cycling; pollution; environmental factors affecting aquatic and terrestrial systems; regulation and dynamics of populations; interactions among species; community ecology; and the ecological viewpoint in modern land management.

#### **ENG 211—WATER RESOURCES MANAGEMENT**

Consists of water pollution problems, characteristics of water pollutants, the overall effect these pollutants have on the environment and on water pollution abatement.

#### **ENV 212 AIR RESOURCES MANAGEMENT**

Consists of basic meteorology, air pollution problems, characteristics of air pollutants, the overall effect these pollutants have on the environment, and air pollution abatement.

### **Sixth Quarter**

#### **POL 103—NATIONAL, STATE, LOCAL GOVERNMENT**

A study of the organization and functions of national, state, and local governments, intergovernmental relationships, and contemporary significant problems.

#### **ENV 220—WATER SAMPLING AND ANALYSIS**

A basic study of water quality standards, water monitoring equipment, water monitoring techniques, and analysis of results.

#### **ENV 221—AIR SAMPLING AND ANALYSIS**

A basic study of air quality standards, air monitoring equipment, air monitoring techniques, and analysis of results.

#### **ENV 222—REGIONAL ENVIRONMENTAL PROBLEMS**

Designed to give the student an awareness of environmental problems such as water and air pollution, waste disposal, erosion, dams, roads, forest management, agricultural practices, and mining in the Southern Appalachians. The effect these problems are having on our environment and solutions to these problems will be examined.

### **Seventh Quarter**

#### **ECO 100—ECONOMICS**

A practical course in applied economics as it relates to man and his efforts to make a living. These economic endeavors will include forms of money, kinds of wages, uses of purchasing power, basic types of insurance, the importance of the effects of the business cycle, and the relationship of value to price based on the laws of supply and demand.

The role of government in the economy, a look at such problems as governmental services, governmental controls over such agencies as banking and credit institutions, and justification of government spending will be undertaken.

Free enterprise and its place among world economic systems will be examined.

#### **ENV 230—ENVIRONMENTAL QUALITY LAWS AND ENFORCEMENT**

A study of local, state, and federal laws and acts concerning environmental quality standards and the use of resources, legal procedure for enforcing laws, and problems concerning enforcement. Included will be environmental standards dealing with polluting sources such as industry, agriculture, municipalities, and individuals.

#### **ENV 231—ENVIRONMENTAL PROJECT**

This course consists of a supervised project concerning an environmental problem in the area which would enable the student to put to use some of the knowledge gained in class. The student will write a report on his project and accomplishments.

Several electives are offered so that the student can specialize in a particular phase of the environmental field.

# **PRACTICAL NURSE EDUCATION**

## **Introduction**

The accelerated growth of population in North Carolina and rapid advancement in medical technology demand an increased number of well-trained personnel for health services. Realizing this need, the State Department of Community Colleges, in conjunction with local hospitals, administers programs of practical nurse education in local school systems, community colleges, technical institutes, and in industrial education centers throughout the state.

## **State Diploma Awarded**

The aim of the Practical Nurse Education Program is to make available to qualified persons the opportunity to prepare for participation in care of patients of all ages, in various states of dependency, and with a variety of illness conditions.

Students are selected on the basis of demonstrated aptitude for nursing as determined by pre-entrance tests, interviews with faculty members, high school record, character references, and reports of medical and dental examination.

Throughout the one-year program the student is expected to grow continuously in acquisition of knowledge and understanding related to nursing, the biological sciences, the social sciences and in skills related to nursing practice, communications, interpersonal relations, and use of good judgment. Evaluation of student performance consists of tests on all phases of course content, evaluation of clinical performance, and evaluation of adjustment to the responsibilities of nursing. A passing score is required on all graded work, plus demonstrated progress in application of nursing skills to actual patient care.

Graduates of accredited programs of practical nurse education are eligible to take the licensing examination given by the North Carolina Board of Nursing. This examination is given twice each year, usually in April and September. A passing score entitles the individual to receive a license and to use a legal title, "Licensed Practical Nurse." The license must be renewed annually. The Licensed Practical Nurse can apply for license in other states on the basis of a satisfactory examination score, without repeating the examination.

## **Occupational Opportunities**

The LPN is prepared to function in a variety of situations: hospitals of all types, nursing homes, clinics, doctors' and dentists' offices and, in some localities, public health facilities. In all situations the LPN functions under supervision of a registered nurse and/or licensed physician. This supervision may be minimal in situations where the patient's condition is stable and not complex; or it may consist of continuous direction in situations requiring the knowledge and skills of the registered nurse or physician. In the latter situation, the LPN may function in an assisting role in order to avoid assuming responsibility beyond that for which the one-year program can prepare the individual.

Job requirements for the Licensed Practical Nurse include suitable personal characteristics, ability to adapt knowledge and understandings of nursing principles to a variety of situations, technical skills for performance of bedside nursing, appreciation for differences of people and for the worth of every individual, a desire to serve and help others, and readiness to conform to the requirements of nursing ethics and hospital policies.

		Class	Lab. Clinic	Cntct. Hrs. per Qtr.	Credit Hrs.
<b>First Quarter</b>					
NUR 1001	Practical Nursing I	25	2	330	20
ENG 1101	English A	2	0		
<b>Second Quarter</b>					
NUR 1002	Practical Nursing II	12	24	385	20
ENG 1102	English B	3	0		
<b>Third Quarter</b>					
NUR 1003	Practical Nursing III	12	24	385	20
<b>Fourth Quarter</b>					
NUR 1004	Practical Nursing IV	12	24	385	20
TOTAL		66	74	1485	80

## PRACTICAL NURSE EDUCATION

### Course Descriptions by Quarters

#### First Quarter

##### NUR 1001—PRACTICAL NURSING I

Designed to assist students in acquiring the knowledge, understandings, appreciations, and attitudes basic to effective nursing of patients of all ages and backgrounds. Emphasis is on nursing needs arising both from the individuality of the patient and from inability for self-care as a result of a health deviation. Patient-centered studies include analysis of patient needs both through classroom study of hypothetical patient situations and through planned experiences in the clinical environment. Beginning skills in nursing methods are developed through planned laboratory practice and supervised patient care.

##### ENG 1101—ENGLISH A

Designed to improve the student's ability to read rapidly and accurately. Special machines are used for class drill to broaden the span of recognition, to increase eye coordination and word group recognition and to train for comprehension in larger units.

#### Second Quarter

##### NUR 1002—PRACTICAL NURSING II

Designed to introduce the student to deviations from normal, to nursing methods and therapeutic procedures, and to the clinical specialties. Continued patient-centered study, with introduction of the illness condition as an additional source of nursing needs. Increased emphasis on clinical activities and selected patient care.

##### ENG 1102—ENGLISH B

Development of the student's ability to communicate effectively with other individuals through the medium of good language usage in speaking and writing, to think more clearly, and to reason more forcefully in work problems pertaining to his job. Prerequisite ENG 1101.

### Third Quarter

#### NUR 1003—PRACTICAL NURSING III

Designed to acquaint the student with common illness conditions, related nursing needs and therapeutic methods, and role of the practical nurse in care of patients with specific conditions. Learning situations are selected to illustrate commonalities with a wide variety of similar conditions and to promote student awareness of similarities and differences. Clinical practice emphasizes student experience in care of subacutely ill patients with a wide variety of illnesses, correlated with classroom studies insofar as possible.

#### NUR 1004—PRACTICAL NURSING IV

Designed to introduce the student to care of patients with complex nursing needs and to the assisting role of the practical nurse in situations requiring judgments based on depth of knowledge. Clinical practice includes supervised care of labor patients and seriously ill adults and children.

	<b>Class</b>	<b>Lab</b>	<b>Clinic</b>	<b>Contact Hours</b>	<b>Credit Hours</b>
<b>First Quarter</b>					
Practical Nursing I	300	30	0	330	20
English 1101	22				
Fundamentals of Nursing	120	30			
Anatomy and Physiology	85				
Nutrition and Diet	35				
Intro. Drug. Adm.	25				
<b>Second Quarter</b>					
Practical Nursing II	231	0	154	385	20
Medical-Surgical Nursing II	71		54		
Maternity Nursing	70		50		
Pediatric Nursing	70		50		
Communicable Diseases	20				
English 1102	33				
<b>Third Quarter</b>					
Practical Nursing III	154	0	231	385	20
Medical-Surgical Nursing III	81				
Drug & Administration	40				
<b>Fourth Quarter</b>					
Practical Nursing IV	154	0	231	385	20
Medical-Surgical Nursing II	124				
Mental Illness	20				
Vocational Adjustments III	10				
Total				1485	

## RECREATION TECHNOLOGY

The Recreation Curriculum is designed to qualify personnel to plan and directly supervise recreational activities for all age groups, to plan, develop, operate and maintain recreational sites and facilities which offer all practical activities, and to actively promote conservation education through area educational agencies.

The two-year program will be segmented to meet the needs of personnel who will be working with people in the following categories: pre-school groups, school-age children and young adults, adults, senior citizens and handicapped persons, clientele of commercial resorts and public and private recreational programs.

Specific attention will be given to training in these areas: the administration of recreational programs, leadership, arts and crafts, indoor and outdoor individual and group activities and the planning and development of recreational areas in appropriate physical sites.



## Occupational Opportunities

Employment opportunities for professionally trained leaders exist in community recreation programs, projects of local governments, YMCA's, YWCA's, Boys Clubs, Boy Scouts, Girl Scouts, hospitals, nursing homes, penal institutions, state parks, federal parks, industry, public and private resorts, summer camps, rehabilitation agencies and regional institutions.

## RECREATION TECHNOLOGY

### Year I

First Quarter			Class	Lab	Credit
ENG	100	English I	3	2	4
MAT	110	Bus Math	5	0	5
BUS	102	Typewriting (or elective)	2	3	3
REC	110	Professional (Orientation)	5	0	5
REC	111	Arts and Crafts	2	3	3
			<hr/> 17	<hr/> 8	<hr/> 20

Second Quarter					
ENG	101	English II	3	2	4
ECO	100	Applied Economics	3	2	4
REC	120	Recreational Leadership	3	2	4
REC	121	Music	3	2	4
REC	123	Conservation Education	5	0	5
			<hr/> 17	<hr/> 8	<hr/> 21

Third Quarter					
ENG	102	English III	3	2	4
BUS	123	Business Finance	3	2	4
REC	131	Drama	3	2	4
REC	132	Outdoor Education	3	2	4
REC	133	Recreational Grounds Management	2	6	5
			<hr/> 14	<hr/> 14	<hr/> 21

Fourth Quarter					
REC	140	Practicum	6	30-40	15

Fifth Quarter					
ENG	204	English IV	3	2	4
SSC	201	Social Science	3	2	4
REC	255	Fall Activities	2	3	3
REC	257	State and Federal Land Management	3	2	4
REC	258	Water-Related Activities	2	3	3
			<hr/> 13	<hr/> 12	<hr/> 18

Sixth Quarter					
ENG	103	English V	3	0	3
SSC	202	Social Science	3	2	4
REC	265	Winter Activities	2	5	4
REC	267	Municipal Recreation Administration	5	0	5
REC	266	Special Recreation	3	2	4
			<hr/> 16	<hr/> 9	<hr/> 20

### Seventh Quarter

REC 271	Dance	2	3	3
REC 272	First Aid and Safety	3	0	3
REC 275	Spring Activities	2	3	3
REC 279	Seminar in Recreation	5	2	5
	Elective	3	2	4
		<hr/> 15	<hr/> 10	<hr/> 18

### Electives

REC 140	Elementary Swimming	0	3	1
REC 141	Intermediate Swimming	0	3	1
REC 142	Advanced Synchronized Swimming	0	2	1
REC 143	Senior Life-Saving	0	2	1
REC 148	Water Safety Instructor	0	2	1

## RECREATION TECHNOLOGY

### Course Descriptions by Quarters

#### First Quarter

##### ENG 100—ENGLISH I

A sincere effort to encourage the student's development of reading comprehension and reading rate. Emphasizing the grasp of basic ideas rather than words. To have a storehouse of workable techniques which the student may use in reading assignments. Thus, helping him to identify, interpret and evaluate ideas. With purposeful practice and adequate motivation, the student's achievement will improve.

##### MAT 110—BUS MATH

This course stresses the fundamental operations and their application to business problems. Topics covered include payrolls, price marking, interest and discount, commission, taxes, and pertinent uses of mathematics in the field of business.

##### BUS 102—TYPEWRITING

Introduction to the touch typewriting system with emphasis on correct techniques, mastery of the keyboard, simple business correspondence, tabulation, and manuscripts.

##### REC 110—PROFESSIONAL ORIENTATION

Designed to introduce the history and fundamentals of organized recreation services, major program areas, organizations, special agencies and institutions which serve the recreation need of society. Field trips to be arranged.

##### REC 111—ARTS AND CRAFTS

Designed to acquaint students with practical activities and materials which can be used in a variety of recreational settings by all groups. Practice in woodcrafts, jewelry making, photography, lapidary, ceramics, and other recreational arts and crafts.

#### Second Quarter

##### ENG 101—ENGLISH II

Designed to aid the student in the improvement of self-expression in grammar. The approach is functional with emphasis on grammar, diction, sentence structure, punctuation, and spelling. Intended to stimulate students in applying the basic principles of English grammar in their day-to-day situations in industry and social life. Prerequisite: ENG 100.

##### ECO 100—APPLIED ECONOMICS

A practical course in applied economics as it relates to man and his efforts to make a living. These economic endeavors will include forms of money, kinds of wages, uses of purchasing power, basic types of insurance, the importance of the effects of the business cycle, and the relationship of value to price based on the laws of supply and demand.

##### REC 120—RECREATIONAL LEADERSHIP

A study of recreation based on leadership techniques. Emphasis is on

group work. Provides insight into the theory, principles and practice of planning, org, and effective rec. programs.

#### **REC 121—MUSIC**

Presents music as an integral part of a well-planned recreation program. Group singing, instruments, rhythms, and music appreciation are included with emphasis on music as recreation rather than a performing art.

#### **REC 123—CONSERVATION EDUCATION**

An overview of the broad aspects of conservation practices in recreation emphasizing creative use of natural resources and environment, including land (forests) water, air and wildlife. Field trips to be arranged.

### **Third Quarter**

#### **ENG 102—ENGLISH III**

Designed to aid the student in the improvement of self-expression in business and technical composition. Emphasis is on the sentence, paragraph and whole composition. Prerequisite: ENG 101.

#### **BUS 123—BUSINESS FINANCE**

Financing of business units, as individuals, partnerships, corporations, and trusts. A detailed study is made of short-term and consumer financing.

#### **REC 131—DRAMA**

Use in such dramatic techniques as pantomime, spontaneous dialogue and characterization. Emphasis is on possibilities of use in varied recreation situations rather than on skills or play-production.

#### **REC 132—OUTDOOR EDUCATION**

Includes study of the history, developments, and trends of outdoor recreation and organized camping. Emphasis is on laboratory work, field trips, development of outdoor and camping skills, and leadership training for camp counselors and directors.

#### **REC 133—RECREATIONAL GROUNDS MANAGEMENT**

Deals with principles and problems involved in the construction and utilization of outdoor recreational facilities. Presents basic porticulture and part layout.

### **Fourth Quarter**

#### **REC 140—PRACTICUM**

### **Fifth Quarter**

#### **ENG 204—ENGLISH IV**

A study of basic concepts and principles of oral communications to enable the student to communicate with others. Emphasis is placed on the speaker's attitude, improving diction, voice, and the application of particular techniques of theory to correct speaking habits and to produce effective oral presentation. Particular attention given to conducting meetings, conferences, and interviews. Prerequisite: ENG 102.

#### **SSC 201—SOCIAL SCIENCE**

An integrated course in the social sciences drawing from the fields of anthropology, psychology, history, and sociology.

#### **REC 255—FALL ACTIVITIES**

A survey of the basic terminology, skills and rules of team and lifetime activities suited to but not restricted to the autumn months. Includes tag football, handball, badminton, table tennis, billiards, etc. Emphasis is on organizational and promotion rather than mastery of performance skills.

#### **REC 257—STATE AND FEDERAL LANDS MANAGEMENT**

Survey of responsibilities of park personnel: recreation program administration, construction and maintenance, enforcement of regulations in state and national lands. Report writing and record keeping.

#### **REC 258—WATER-RELATED ACTIVITIES**

Includes the basic terminology skills and techniques of selected water-related activities, e.g. water relays, boating, canoeing, and tubing etc.

### **Sixth Quarter**

#### **ENG 103—ENGLISH V**

The fundamentals of English are utilized as a background for the organi-

zation and techniques of modern report writing. Exercises in developing typical reports using writing techniques and graphic devices are completed by the students practical application in the preparation of a full length report is required of each student at the end of the term. This report must have to do with something in his chosen curriculum. Prerequisite: ENG 204.

#### **SSC 202—SOCIAL SCIENCE**

A further study of social sciences with emphasis on economics, political science, and social problems as they relate to the individual. Prerequisite: SSC 201.

#### **REC 265—WINTER ACTIVITIES**

A survey of the basic terminology, skills and rules of team and life-time activities suited to but not restricted to the winter months. Includes skiing, hunting, tobogganing, skating, volleyball and basketball. Emphasis is on organization and promotion rather than on mastery of performance skills.

#### **REC 267—MUNICIPAL RECREATION ADMINISTRATION**

A study of the history, principles, organization, administration and operation of community recreation facilities and programs. Emphasis is on organized programs and service, fund-raising, publicity, etc. with particular emphasis on summer activities.

#### **REC 266—SPECIAL RECREATION**

Emphasis will be given to recreation programs and employment opportunities in rest homes, hospitals, industry and retirement resorts or villages and service organizations.

### **Seventh Quarter**

#### **REC 271—DANCE**

Introduces methods and materials of folk, square, creative and social dance. Attention is given to terminology, skills, selection and presentation of dances. Emphasis is on knowledge and understanding of the organization and promotion of activities rather than on dancing skills.

#### **REC 272—FIRST AID AND SAFETY**

Prevention of accidents; standard and advanced courses as organized by the American Red Cross.

#### **REC 275—SPRING ACTIVITIES**

A survey of the basic terminology, skills and rules of team and lifetime activities suited to but not restricted to the spring months. Includes archery, baseball, softball, golf, tennis, etc. Emphasis is on organization and performance skills.

#### **REC 279—SEMINAR IN RECREATION**

A culminating experience dealing with current practical problems in recreation growing out of reading from extant literature and from field experiences.

Elective

### **Electives**

#### **REC 140—ELEMENTARY SWIMMING**

Required of all students who have failed the swimming classification test. Designed to provide basic water safety skills outlined by the American National Red Cross.

#### **REC 141—INTERMEDIATE SWIMMING**

The course follows the American National Red Cross outline for intermediate swimming including the basic strokes and diving skills.

#### **REC 142—ADVANCED SYNCHRONIZED SWIMMING**

Perfection of swimming skills and group work. Prerequisite: REC 141.

#### **REC 143—SENIOR LIFE-SAVING**

Life Saving Skills and Techniques. Red Cross certification issued. Prerequisite: REC 141.

#### **REC 148—WATER SAFETY INSTRUCTOR**

Red Cross certification issued.



# DEPARTMENT OF INDUSTRIAL-VOCATIONAL SKILLS

**AUTO BODY REPAIR  
AUTOMOTIVE MECHANICS  
CARPENTRY  
ELECTRONIC SERVICING  
GENERAL MASONRY  
PLUMBING AND PIPEFITTING  
SURVEYING**

## AUTO BODY REPAIR

The field of automotive body repair and painting needs more well-trained people to meet the growing demands in this area of employment. In this program, much of the student's time in the shop is devoted to learning skills and practicing these skills on car bodies and the component parts. Every attempt is made to make these practical experiences as close as possible to actual on the job situations. The practical experience and related training provide an ideal way to prepare the students for entry into an occupation that offers many job opportunities.

### Occupational Opportunities

Graduates of the Auto Body Repair Curriculum are qualified for jobs in which they remove dents in automobile bodies and fenders; replace fenders; straighten frames, doors, hoods, and deck lids; and align wheels. In their work these craftsmen operate welding equipment. They also make tests on and repair engine cooling systems. Auto body repairmen shrink stretched metal and prepare it for painting. They are called on to paint fenders and panels as well as to paint a complete vehicle. In addition to these duties, auto body repairmen remove, cut, fit, and install glass. They are required to remove and install interior trim; cut, sew, and install headings and seat covers; repair and replace upholstery and fabric tops on vehicles; and interpret blueprints, charts, instruction and service manuals, and wiring diagrams. These repairmen also prepare orders for repairs and parts as well as estimates and statements for adjusters. After gaining experience, many of these craftsmen open their own businesses or become body shop foremen, supervisors, or managers.

First Quarter			Class	Lab	Credit
AUT	1111	Auto Body Repair	3	12	7
MAT	1101	Fundamentals of Mathematics	5	0	5
PHY	1101	Applied Science	3	2	4
ENG	1101	English A	2	0	2
WLD	1101	Basic Welding	0	3	1
			<hr/> 13	<hr/> 17	<hr/> 19
Second Quarter					
AUT	1112	Auto Body Repair	3	12	7
WLD	1105	Auto Body Welding	1	3	2
DFT	1101	Schematics and Diagrams:			
		Power Mechanics	0	3	1
PHY	1102	Applied Science	3	2	4
ENG	1102	English B	3	0	3
			<hr/> 10	<hr/> 20	<hr/> 17

### Third Quarter

AUT 1113	Metal Finishing and Paintings	3	12	7
PSY 1101	Human Relations	3	0	3
AUT 1115	Trim, Glass and Radiator Repair	2	10	5
		<hr/> 8	<hr/> 22	<hr/> 15

### Fourth Quarter

AUT 1114	Body Shop Application	3	21	10
BUS 1103	Small Business Operations	3	0	3
ECO 1000	Applied Economics	3	0	3
		<hr/> 9	<hr/> 21	<hr/> 16

## AUTO BODY REPAIR

### Course Descriptions by Quarters

#### First Quarter

##### AUT 1111—AUTO BODY REPAIR

Basic principles of automobile construction, design, and manufacturing. A thorough study of angles, crown, and forming of steel into the complex contour of the present day vehicles. The student applies the basic principles of straightening, aligning, and painting of damaged areas.

##### MAT 1101—FUNDAMENTALS OF MATHEMATICS

Practical number theory. Analysis of basic operations: addition, subtraction, multiplication and division. Fractions, decimals, powers and roots, percentages, ratio and proportion. Plane and solid geometric figures used in industry; measurement of surfaces and volumes. Introduction to algebra used in trades. Practice in depth.

##### PHY 1101—APPLIED SCIENCE

An introduction to physical principles and their application in industry. Topics in this course include measurements; properties of solids, liquids, and gases; basic electrical principles.

##### ENG 1101—ENGLISH A

Designed to improve the student's ability to read rapidly and accurately. Special machines are used for class drill to broaden the span of recognition, to increase eye coordination and word group recognition and to train for comprehension in larger units.

##### WLD 1101—BASIC WELDING

Welding demonstrations by the instructor and practice by students in the welding shop. Safe and correct methods of assembling and operating the welding equipment. Practice will be given for surface welding, bronze welding, silver-soldering, and flame-cutting methods applicable to mechanical repair work.

#### Second Quarter

##### AUT 1112—AUTO BODY REPAIR

A thorough study of the requirements for a metal worker, including the use of essential tools, forming fender flanges and beads, and straightening typical auto body damage. The student begins acquiring skills such as shaping angles, crowns, and contour of the metal of the body and fenders. Metal working and painting. Prerequisites: AUT 1111, WLD 1101, PHY 1101, MAT 1101.

##### WLD 1105—AUTO BODY WELDING

Welding practices on material applicable to the installation of body panels and repairs to doors, fenders, hoods and deck lids. Student runs beads, does butt and fillet welding. Performs tests to detect strength and weaknesses of welded joints. Safety procedures are emphasized throughout the course. Prerequisite: WLD 1101.

##### DFT 1101—SCHEMATICS AND DIAGRAMS: POWER MECHANICS

Interpretation and reading of schematics and diagrams. Development of ability to read and interpret blueprints, charts instruction and service manuals, and wiring diagrams. Information on the basic principles of lines, views, dimensioning procedures, and notes.

### **PHY 1102—APPLIED SCIENCE**

The second in a series of courses of applied physical principles. Topics introduced in this course are heat and thermometry and principles of force, motion, work, energy, and power. Prerequisite: PHY 1101.

### **ENG 1102—ENGLISH B**

Development of the student's ability to communicate effectively with other individuals through the medium of good language usage in speaking and writing, to think more clearly, and to reason more forcefully in work problems pertaining to his job. Prerequisite: ENG 1101.

### **Third Quarter**

#### **AUT 1113—METAL FINISHING AND PAINTING**

Development of the skill to shrink stretched metal, soldering and leading, and preparation of the metal for painting. Straightening of doors, hoods, and deck lids; fitting and aligning. Painting fenders and panels, spot repairs, and complete vehicle painting; the use and application of power tools. Prerequisites: AUT 1112, WLD 1105.

#### **PSY 1101—HUMAN RELATIONS**

A study of basic principles of human behavior. The problems of the individual are studied in relation to society, group membership, and relationships within the work situation.

#### **AUT 1115—TRIM, GLASS AND RADIATOR REPAIR**

Methods of removing and installing interior trim; cutting, sewing and installing headlinings, seat covers, and door trim panels; painting of trim parts and accessories. Glass removal, cutting, fitting, and installation. The student gains a thorough knowledge of the engine cooling system and repairs and replaces damaged cooling system components. Tests are made to insure normal engine cooling operation. Prerequisites: AUT 1112, WLD 1105.

### **Fourth Quarter**

#### **AUT 1114—BODY SHOP APPLICATIONS**

General introduction and instruction in the automotive frame and front end suspension systems, the methods of operation and control, and the safety of the vehicle. Unit job application covers straightening of frames and front wheel alignment. The student applies all phases of training. Repair order writing, parts purchasing, estimates of damage, and developing the final settlement with the adjuster. Prerequisites: AUT 1115, PHY 1102, DFT 1101.

#### **BUS 1103—SMALL BUSINESS OPERATIONS**

An introduction to the business world, problems of small business operation, basic business law, business forms and records, financial problems, ordering and inventorying, layout of equipment and offices, methods of improving business, and employer-employee relations.

#### **ECO 1000—APPLIED ECONOMICS**

Designed to help the student understand present-day economic problems. Topics include: production, consumption, exchange and distribution, money and credit, business fluctuations, labor and management relations, and challenges to our system of free enterprise.

## **AUTOMOTIVE MECHANICS**

This is a one-year program providing thorough training in the theoretical as well as manual skills in servicing, testing and diagnosing. All phases of the electrical system, the power plant, braking system, and the power train will be studied.

The courses are arranged in a sequence that gives the student the required technological and special skills as they are needed to coordinate with his laboratory experiences.

Emphasis is placed on the mechanical parts and operation of the various automobile units. Trouble shooting and servicing of the live project is also stressed.

## Occupational Opportunities

Auto Mechanic, Truck and Bus Mechanic, Shop Foreman, Maintenance Supervisor, Dealer, Service Manager, Sales Technician, Factory Representative, and Experimental Lab Worker are among those occupational opportunities awaiting graduates of the Automotive Mechanics Curriculum.

First Quarter		Class	Lab	Credit
PME 1101	Internal Combustion Engines	3	14	7
MAT 1101	Fundamentals of Mathematics	3	0	3
ENG 1101	English A	2	0	2
PHY 1101	Applied Science	3	2	4
ECO 1000	Applied Economics	3	0	3
		<hr/>	<hr/>	<hr/>
		14	16	19

### Second Quarter

PME 1102A	Engine Electrical and Fuel Systems	5	14	9
PHY 1102	Applied Science	3	2	4
ENG 1102	English B	3	0	3
DFT 1101	Schematics and Diagrams: Power Mechanics	0	3	1
		<hr/>	<hr/>	<hr/>
		11	19	17

### Third Quarter

AUT 1123	Automotive Chassis and Suspension Systems	3	9	6
AUT 1101	Small Engine	3	3	4
PSY 1101	Human Relations	3	0	3
WLD 1101	Basic Welding	0	3	1
AUT 1121	Braking Systems	3	3	4
		<hr/>	<hr/>	<hr/>
		12	18	18

### Fourth Quarter

AUT 1124	Automotive Power Train Systems	3	9	6
BUS 1103	Small Business Operations	3	0	3
AUT 1125	Automotive Servicing	3	7	5
AHR 1101	Air Conditioning Systems	2	3	3
		<hr/>	<hr/>	<hr/>
		11	19	17

## AUTOMOTIVE MECHANICS

### Course Descriptions by Quarters

#### First Quarter

##### PME 1101—INTERNAL COMBUSTION ENGINE

Development of a thorough knowledge and ability in using, maintaining, and storing the various hand tools and measuring devices needed in engine repair work. Study of the construction and operation of components of internal combustion engines. Testing of engine performance; servicing and maintenance of pistons, valves, cams and camshafts, fuel and exhaust systems, cooling systems; proper lubrication; and methods of testing, diagnosing and repairing.

##### MAT 1101—FUNDAMENTALS OF MATHEMATICS

Practical number theory. Analysis of basic operations; addition, subtraction, multiplication and division. Fractions, decimals, powers and roots, percentages, ratio and proportion. Plane and solid geometric figures used in industry; measurement of surfaces and volumes. Introduction to algebra used in trades. Practice in depth.

##### ENG 1101—ENGLISH A

Designed to improve the student's ability to read rapidly and accurately. Special machines are used for class drill to broaden the span of recogni-



tion, to increase eye coordination and word group recognition and to train for comprehension in larger units.

#### **PHY 1101—APPLIED SCIENCE**

An introduction to physical principles and their application in industry. Topics in this course include measurements; properties of solids, liquids, and gases; basic electrical principles.

#### **ECO 1000—APPLIED ECONOMICS**

Designed to help the student understand present-day economic problems. Topics include: production, consumption, exchange and distribution, money and credit, business fluctuations, labor and management relations, and challenges to our system of free enterprise.

### **Second Quarter**

#### **PME 1102A—ENGINE ELECTRICAL AND FUEL SYSTEMS**

A thorough study of the electrical and fuel systems of the automobile. Battery cranking mechanism, generator, ignition, accessories and wiring; fuel pumps, carburetors, and fuel injectors. Characteristics of fuels, types of fuel systems, special tools, and testing equipment for the fuel and electrical system. Prerequisite: PME 1101.

#### **PHY 1102—APPLIED SCIENCE**

The second in a series of courses of applied physical principles. Topics introduced in this course are heat and thermometry and principles of force, motion, work, energy, and power. Prerequisite: PHY 1101.

#### **ENG 1102—ENGLISH B**

Development of the student's ability to communicate effectively with other individuals through the medium of good language usage in speaking and writing, to think more clearly, and to reason more forcefully in work problems pertaining to his job. Prerequisite: ENG 1101.

#### **DFT 1101—SCHEMATICS AND DIAGRAMS: POWER MECHANICS**

Interpretation and reading of schematics and diagrams. Development of ability to read and interpret blueprints, charts instruction and service manuals, and wiring diagrams. Information on the basic principles of lines, views, dimensioning procedures, and notes.

### **Third Quarter**

#### **AUT 1123—AUTOMATIVE CHASSIS AND SUSPENSION SYSTEMS**

Principles and functions of the components of automotive chassis. Practical job instruction in adjusting and repairing of suspension, and steering systems. Units to be studied will be shock absorbers, springs, steering systems, steering linkage, and front end and alignment. Prerequisite: PME 1102.

#### **AUT 1101—SMALL ENGINES**

The purpose of this course is to teach the why and how of gasoline engine operations. A careful study of the theory and operating principles, plus actual practice in servicing and repairing engines will enable anyone to minimize engine troubles and to correct those troubles that do exist. The course will in general deal with small engines. Multicylinder engines will be included.

#### **PSY 1101—HUMAN RELATIONS**

A study of basic principles of human behavior. The problems of the individual are studied in relation to society, group membership, and relationships within the work situation.

#### **WLD 1101—BASIC WELDING**

Welding demonstrations by the instructor and practice by students in the welding shop. Safe and correct methods of assembling and operating the welding equipment. Practice will be given for surface welding, bronze welding, silver-soldering, and flame-cutting methods applicable to mechanical repair work.

#### **PME 1121—BRAKING SYSTEMS**

Braking principles are studied in relation to the efficiencies of friction and heat, and the expansion of materials. The operating principles of hydraulic, pneumatic, combination, and vacuum brake systems are emphasized. Laboratory instruction is offered in the installation of brake lining shoes, shoe reconditioning, drum turning, assembling and adjusting of brake systems and servicing of auxiliary units.

#### **Fourth Quarter**

##### **AUT 1124—AUTOMOTIVE POWER TRAIN SYSTEMS**

Principles and functions of automotive power train systems, clutches, transmission gears, torque converters, drive shaft assemblies, rear axles and differentials. Identification of troubles, servicing, and repair. Prerequisites: PHY 1102, AUT 1123.

##### **BUS 1103—SMALL BUSINESS OPERATIONS**

An introduction to the business world, problems of small business operation, basic business law; business forms and records, financial problems, order and inventories, layout of equipment and offices, methods of improving business, and employer-employee relations.

##### **AUT 1125—AUTOMOTIVE SERVICING**

Emphasis is on the shop procedures necessary in determining the nature of troubles developed in the various component systems of the automobile. Extensive use of testing equipment will be made on the actual problem situations. A close simulation to the actual automotive shop will be maintained and every close effort will be made to give the student a full range of testing and servicing experience. Prerequisites: AUT 1121, 1122, 1123, 1123.

##### **AHR 1101—AIR CONDITIONING SYSTEMS**

General introduction to the principles of refrigeration; study of the assembly of the components and connections necessary in the mechanisms, the methods of operation, and control; proper handling of refrigerants in charging the system. Prerequisite: PHY 1102.

## **CARPENTRY**

Carpentry is one of the basic trades in the construction field. Carpenters construct, erect, install, and repair structures of wood, plywood, and wallboard, using hand and powertools. The work must conform to local building codes for both residential and commercial structures.

This curriculum in carpentry is designed to train the individual to enter the trade with a background in both shop skills and related information. He must have a knowledge of mathematics, blueprint reading, methods of construction and a thorough knowledge of building materials.

The modern carpenter will work on new construction, maintenance, and repair of many types of structures, both residential and commercial. He should have an understanding of building materials, concrete form construction, rough framing, roof and stair construction, the application of interior and exterior trim, and the installation of cabinets and fixtures.

Most carpenters are employed by contractors in the building construction fields. When specializing in a particular phase of carpentry, the job is designated according to the specialty as layout carpenter, framing carpenter, concrete form carpenter, scaffolding carpenter, accoustical and insulating carpenter, and finish carpenter.

## **Occupational Opportunities**

The carpenter constructs, erects, installs and repairs structures and fixtures of wood, plywood, wall board and other materials, using carpenters handtools and powertools to conform to local building codes. He is required to use blueprints, sketches or building plans for information pertaining to type of material, dimensions, layout and design of structure, and method of construction.

First Quarter		Class	Lab	Credit
CAR 1101	Carpentry I	5	20	12
DFT 1110	Blueprint Reading: Building Trades	0	3	1
PSY 1104	Occupational Orientation	2	0	2
		7	23	15

#### Second Quarter

CAR 1103	Carpentry II	5	25	13
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#### Third Quarter

CAR 1105	Carpentry III	5	25	13
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## CARPENTRY

### Course Descriptions by Quarters

#### First Quarter

##### CAR 1101—CARPENTRY I

A brief history of carpentry and present trends of the construction industry. The course will involve operation care and safe use of carpenters handtools and powertools in cutting, shaping and joining construction materials used by the carpenter. Major topics of study will include theoretical and practical applications involving, materials and methods of construction, building layout, preparation of site, footings and foundation wall construction including form construction and erection.

##### DFT 1110—BLUEPRINT READING: BUILDING TRADES

Principles of interpreting blueprints and specifications common to the building trades. Development of proficiency in making three view and pictorial sketches.

##### PSY 1104—OCCUPATIONAL ORIENTATION

This course is designed to introduce a student to the responsibilities and expectations of employment. Areas to be covered would include attitude, public relations, job safety, health care, employer-employee relations and job placement.

#### Second Quarter

##### CAR 1103—CARPENTRY II

Instruction is given in the principles and practices of frame construction beginning with the foundation sills and including: floor joist, subfloor, wall studs, ceiling joist, rafters, bridging, bracing, sheathing and interior wall partition. Roof construction includes the layout and construction methods of common types of roofs using standard rafter construction, truss construction, and post and beam construction. Application and selection of sheathing and roofing is included. Consideration is given to the coordination of carpentry work with installation of the mechanical equipment such as: electrical, air conditioning, heating, and plumbing.

#### Third Quarter

##### CAR 1105—CARPENTRY III

A continuation of Carpentry II.

## ELECTRONIC SERVICING

With the advent of the space age and its technical advances, particularly in the field of electronics, many completely new positions in specialized fields have been opened to the enterprising and adequately qualified technician.

For this reason, the curriculum has been especially designed to provide the student with both the technical training and the practical experience necessary to succeed in his chosen field.

There are two courses of study that the student may follow. Students desiring to prepare for the FCC second class radiotelephone license exam-

ination or to enter the field of TV servicing may choose a one year program of study. Those interested in advanced training may continue for an additional four quarters. Upon completion the graduate will have earned his FCC first class radiotelephone license with a radar endorsement.

### Occupational Opportunities

Graduates of the one year program may be employed as a TV serviceman, communications technician or electronic maintenance technician. Two year graduates may find additional opportunities in such fields as radio-TV broadcasting, computers and digital circuitry, aviation electronics, microwave and radar.

First Quarter			Class	Lab	Credit
MAT	1115	Electrical Math	5	0	5
ELC	1112	Direct and Alternating Current	5	18	11
ENG	1101	English A	2	0	2
			12	18	18
Second Quarter					
MAT	1116	Electrical Math	5	0	5
ELN	1112	Vacuum Tubes and Solid State Devices	7	15	12
ENG	1102	English B	3	0	3
			15	15	20
Third Quarter					
ELN	1123	Home Entertainment Systems	5	5	7
ELN	1125	Radio Receiver Servicing	5	12	9
PSY	1101	Human Relations	3	0	3
			13	17	19
Fourth Quarter					
ELN	1113	Television Theory and Circuits	7	12	11
ELN	1130	Two-Way Mobile Maintenance	5	3	6
BUS	1103	Small Business Management	3	0	3
			15	15	20
Fifth Quarter					
ELN	1127	Television Receiver Circuits and Servicing	5	12	9
ELN	1129	Single Sideband Systems	3	5	5
ELN	1135	Antenna Theory	3	2	4
			11	19	18
Sixth Quarter					
ELN	1140	Broadcast Communications	5	9	8
ELN	1111	Introduction to Computers	5	8	8
ECO	1000	Applied Economics	3	0	3
			13	17	19
Seventh Quarter					
ELN	1180	Microwave Systems	7	12	11
ELN	1185	Special Circuitry	5	6	7
			12	18	18
Eighth Quarter					
ELN	1190	Radar Fundamentals	7	12	11
ELN	1147	Navigational Aids	3	5	5
ELN	1199	Electronics Seminar	3	0	3
			13	17	19



# ELECTRONIC SERVICING

## Course Descriptions by Quarters

### First Quarter

#### MAT 1115—ELECTRICAL MATH

An introductory algebra course with the trigonometry and vectors required for alternating current. Algebraic operations of addition, subtraction, multiplication, division, exponents, square roots, and powers of ten will be covered.

#### ELC 1112—DIRECT AND ALTERNATING CURRENT

A study of electron theory and the relationship between voltage, current and resistance in series, parallel, and series parallel circuits. The course will also include the fundamental concepts of alternating current with a study of reactance, impedance, phase angle, power, resonance, and alternating current circuit analysis.

#### ENG 1101—ENGLISH A

Designed to improve the student's ability to read rapidly and accurately. Special machines are used for class drill to broaden the span of recognition, to increase eye coordination and word group recognition and to train for comprehension in larger units.

### Second Quarter

#### MAT 1116—ELECTRICAL MATH

Network simplification, simultaneous equations, quadratic equations, logarithms, decibels, angles, trigonometric functions, and number systems for computers. Prerequisite: MAT 1115.

#### ELN 1112—VACUUM TUBES AND SOLID STATE DEVICES

An introduction to vacuum tubes and their development; the theory, characteristics and operation of vacuum tubes, semi-conductor diodes, rectifier circuits, filter circuits, triodes and simple voltage amplifier circuits. Transistor theory, operation, characteristics and their application to audio, radio frequency and oscillator circuits. Prerequisite: ELC 1112.

#### ENG 1102—ENGLISH B

Development of the student's ability to communicate effectively with other individuals through the medium of good language usage in speaking and writing, to think more clearly, and to reason more forcefully in work problems pertaining to his job. Prerequisite: ENG 1101.

### Third Quarter

#### ELN 1123—HOME ENTERTAINMENT SYSTEMS

An introduction of commonly used servicing techniques as applied to monophonic and stereophonic high fidelity amplifiers and auxiliary equipment. The operation and servicing of intercommunication amplifiers and switching circuits will also be taught. Prerequisite: ELN 1112.

#### ELN 1125—RADIO RECEIVER SERVICING

Principles of radio reception and practices of servicing; included are block diagrams of radio receivers, servicing techniques of AM and FM receivers by resistance measurements, signal injection, voltage analysis, oscilloscope methods of locating faulty stages and components and the alignment of AM and FM receivers. Prerequisite: ELN 1112.

#### PSY 1101—HUMAN RELATIONS

A study of basic principles of human behavior. The problems of the individual are studied in relation to society, group membership, and relationships within the work situation.

### Fourth Quarter

#### ELN 1113—TELEVISION THEORY AND CIRCUITS

This is a beginning theory course which introduces the study of the following: brightness control and DC re-insertion circuits, video detector stages, automatic gain control circuits, deflection oscillator and amplifier stages, automatic frequency control circuits, picture IF amplifier stages and RF tuner units, etc. Shop work will include analysis, testing and troubleshooting of the stages studied in class. Prerequisite: ELN 1123, ELN 1125.

#### ELN 1130—TWO-WAY MOBILE MAINTENANCE

A course to acquaint the student with the theory and maintenance of fixed

station and mobile station transmitters and receivers. Emphasis shall be placed on preparation for the FCC second class radiotelephone license examination. Prerequisite: ELN 1123, ELN 1125.

#### **BUS 1103—SMALL BUSINESS MANAGEMENT**

An introduction to the business world, problems of small business operation, basic business law, business forms and records, financial problems, orders and inventories, layout of equipment and offices, methods of improving business, and employer-employee relations.

#### **Fifth Quarter**

##### **ELN 1127—TELEVISION RECEIVER CIRCUITS AND SERVICING**

A study of principles of television receivers, alignment of radio and intermediate frequency amplifiers, adjustment of horizontal and vertical sweep circuits will be taught. Techniques of troubleshooting and repair of TV receivers with the proper use of associated test equipment will be stressed. Additional study of more specialized servicing techniques and oscilloscope waveform analysis will be used in the adjustment, troubleshooting and repair of the color television circuits. Prerequisite: ELN 1113.

##### **ELN 1129—SINGLE SIDEBAND SYSTEMS**

An introductory course of single sideband transmission systems with carrier frequency or without the associated balanced modulator of phasing system used to produce this type of transmission. Time will be allotted also to the necessary circuitry in the receiver to receive this type transmission. Prerequisite: ELN 1125.

##### **ELN 1135—ANTENNA THEORY**

A study of basic antenna theory and wave propagation. The course is designed to acquaint the student with the various types of an antenna systems and the advantages of each. Installation, transmission lines, polarization, directional characteristics and loading techniques will be included. Prerequisite: ELN 1130.

#### **Sixth Quarter**

##### **ELN 1140—BROADCAST COMMUNICATIONS**

A course in advanced transmitter theory with emphasis on preparation for the FCC first class radio-telephone license examination. Commercial AM, FM, and TV systems will be included.

##### **ELN 1111—INTRODUCTION TO COMPUTERS**

An introduction to computer gates; a study of computer circuits, basic diode logic circuits, gates, logic inverters, and adders. Prerequisite: MAT 1116, ELN 1112.

##### **ECO 1000—APPLIED ECONOMICS**

Designed to help the student understand present-day economic problems. Topics include: production, consumption, exchange and distribution, money and credit, business fluctuations, labor and management relations, and challenges to our system of free enterprise.

#### **Seventh Quarter**

##### **ELN 1180—MICROWAVE SYSTEMS**

Designed to familiarize the student with the basic concepts of equipment operating at ultra high frequencies. Wave guides, klystrons, magnetrons, resonant cavities and other special components will be included in the study. Prerequisites: ELN 1130, ELN 1135, ELN 1140.

##### **ELN 1185—SPECIAL CIRCUITRY**

The design and analysis of special circuitry; wave shaping, pulse techniques, broad-band amplifiers, diode switches, multivibrators, gates, magnetic amplifiers, chopper amplifiers, clipper and clamping circuits, synchro and servo systems, photo control devices, step counters and other specific application circuitry. Prerequisites: ELN 1127, ELN 1140.

#### **Eighth Quarter**

##### **ELN 1190—RADAR FUNDAMENTALS**

A study of basic radar circuits and systems with emphasis on alignment and troubleshooting techniques. Sufficient information will be given to take the FCC radar endorsement examination. Prerequisites: ELN 1180, ELN 1185.

##### **ELN 1147—NAVIGATIONAL AIDS**

A study of the electronic systems found in today's aircraft. Distance measuring equipment, automatic direction finders, instrument landing

systems, radar beacon transponders and other associated equipment will be included. Time will also be allotted to shop facilities and regulations. Prerequisites: ELN 1180, ELN 1185.  
**ELN 1199—ELECTRONICS SEMINAR**  
 Designed to allow independent thought and research into the rapidly expanding field of electronics. Recent developments and technical advances will be stressed. Time will also be allotted to an investigation of current employment opportunities. Prerequisites: ELN 1180, ELN 1185.

## GENERAL MASONRY

Opportunities for employment in various types of masonry construction are numerous. Demand for bricklayers, blocklayers, and tile setters is on the increase as the building industry expands. The work may be somewhat seasonal, but wages are usually good.

The masonry course is designed to give student training in various aspects of the trowel trades and includes instruction in brick and block work.

Related study in mathematics, blueprint reading, and estimating are included in the curriculum in order that the individual may develop greater total competence and be better prepared for advancement. On final completion of the six months program, a certificate will be awarded to the graduate by Southwestern Technical Institute.

## MASONRY

<b>First Quarter</b>		<b>Class</b>	<b>Lab</b>	<b>Credit</b>
MAS 1000	Masonry Shop	2	20	9
MAS 1001	Related Mathematics and Blueprint Reading	5	0	5
ECO 1000	Applied Economics	3	0	3
		<hr/> 10	<hr/> 20	<hr/> 17
<b>Second Quarter</b>				
MAS 2000	Masonry Shop	2	23	10
MAS 1002	Advanced Blueprint Reading and Mathematics	5	0	5
		<hr/> 7	<hr/> 23	<hr/> 15

## GENERAL MASONRY

### Course Descriptions by Quarters

#### **First Quarter**

##### **MAS 1000—MASONRY SHOP**

History of brick and block laying, fundamental skills, laying to line, use and care of tools and equipment. Mortar mixing techniques and general masonry procedures.

##### **MAS 1001—MASONRY**

Mathematics and blueprint reading directly related to masonry. Estimating quantities and calculating dimensions from plans.

##### **ECO 1000—APPLIED ECONOMICS**

Designed to help the student understand present-day economic problems. Topics include: production, consumption, exchange and distribution, money and credit, business fluctuations, labor and management relations, and challenges to our system of free enterprise.

#### **Second Quarter**

##### **MAS 2000—MASONRY**

Development of fundamental skills, bond layout, projects with various

types of masonry units, fireplaces, ornamental work, recent developments in the masonry field.

MAS 1002—ADVANCED BLUEPRINT READING AND MATHEMATICS  
Advanced blueprint reading and mathematics related to estimating.

## PLUMBING AND PIPEFITTING

Plumbers are the craftsmen who install pipe systems which carry water, steam, air, or other liquids or gases needed for sanitation, heating, industrial production and various other uses. During the past decade there has been a steady increase in the demand for these craftsmen. As building construction continues to increase, this demand for plumbers will also increase.

This curriculum in plumbing and pipefitting is designed to train the individual to enter this occupation with the knowledge and basic skills that will enable him to perform effectively. Courses in plumbing practices and pipefitting are included to provide practical experience as well as the theoretical information that one must know to advance and keep up-to-date with new innovations. Other courses in communication skills, physics, human relations and business operations are provided to assist the individual in occupational growth.

### Occupational Opportunities

Opportunities for plumbers and pipefitters may be found with plumbing and pipefitting contractors in new building construction. A substantial proportion of plumbers are self-employed or work for plumbing contractors doing repair, alteration, or modernization work. Some plumbers install and maintain pipe systems for government agencies and public utilities, and some work on the construction of ships and aircraft. Pipefitters, in particular, are employed as maintenance personnel in the petroleum, chemical, and food-processing industries.

Most plumbers are employed by contractors in the building construction fields to install pipe systems which carry water, steam, air and other liquids or gases for sanitation, heating, industrial production and various other uses. They also alter and repair existing pipe systems and install plumbing fixtures, appliances, and heating and refrigeration units.

Plumbing and pipefitting are sometimes considered to be a single trade. Journeymen in this field can specialize in either one. Water, gas, and waste disposal systems are installed by plumbers. Pipefitters install both high and low pressure pipes that carry hot water, steam, and other liquids as gases, especially those in industrial and commercial buildings and defense establishments, such as missile launching and testing sites.

## PLUMBING AND PIPEFITTING

First Quarter			Class	Lab	Credit
ENG	1101	English A	2	0	2
PHY	1101	Applied Science	3	2	4
DFT	1110	Blueprint Readings:			
		Building Trades	3	4	4
MAT	1101	Fundamentals of Math	3	0	3
PLU	1110	Plumbing Pipework	3	10	6
			14	16	19



**Second Quarter**

ENG	1102	English B	3	0	3
PHY	1102	Applied Science	3	2	4
DFT	1115	Blueprint Reading: Plumbing Trades	3	0	3
PLU	1111	Domestic Cold Water Systems	2	9	5
PLU	1113	Domestic Hot Water Systems	6	2	7
			<u>17</u>	<u>13</u>	<u>22</u>

**Third Quarter**

PSY	1101	Human Relations	3	0	3
DFT	1116	Plumbing Drawings: Residential	6	0	6
PLU	1112	Installation of Plumbing Fixtures: Residential	0	9	6
PLU	1100	Soldering and Silver Soldering	3	9	6
			<u>12</u>	<u>18</u>	<u>21</u>

**Fourth Quarter**

BUS	1103	Small Business Operations	3	0	3
PLU	1126	Hydraulic System Plumbing	2	3	3
PLU	1114	Commercial Piping (Plumbing)	3	6	5
WLD	1141	Basic Welding	3	7	5
PLU	1118	Plumbing Codes	3	0	3
			<u>14</u>	<u>16</u>	<u>19</u>

**Fifth Quarter**

ECO	1000	Applied Economics	3	0	3
MAT	1112	Construction Estimating	3	3	4
DFT	1117	Plumbing Drawings (Commercial)	3	6	5
WLD	1104	Basic ARC Welding	3	9	6
			<u>12</u>	<u>18</u>	<u>18</u>

**Sixth Quarter**

MAT	1114	Plumber and Fitter	3	0	3
PLU	1101	Working with Lead	2	9	5
DFT	1118	Plumbing Drawings (Industrial)	3	3	4
PLU	1125	Industrial Piping	3	7	6
			<u>11</u>	<u>19</u>	<u>18</u>

**Seventh Quarter**

PLU	1120	Low Pressure Steam System	2	6	4
AHR	1116	Oil Burner Installation	3	9	6
PLU	1123	Panel Heating and Hot Water Boilers	3	7	5
			<u>8</u>	<u>22</u>	<u>15</u>

**Eighth Quarter**

PLU	1121	High Pressure Steam System	3	10	6
ISC	1101	Industrial Safety	3	0	3
PLU	1131	Fuels and Burners	3	4	4
PLU	1132	Circuit and Controls	3	4	4
			<u>12</u>	<u>18</u>	<u>17</u>

**PLUMBING AND PIPEFITTING****Course Descriptions by Quarters****First Quarter**

ENG 1101—ENGLISH A

Designed to improve the student's ability to read rapidly and accurately. Special machines are used for class drill to broaden the span of recognition,

to increase eye coordination and word group recognition and to train for comprehension in larger units. Prerequisite: None

#### **PHY 1101—APPLIED SCIENCE**

An introduction to physical principles and their application in industry. Topics in this course include measurement; properties of solids, and gases; basic electrical principles. Prerequisite: None

#### **DFT 1110—BLUEPRINT READING: BUILDING TRADES**

Principles of interpreting blueprints and trade specifications common to the building trades. Development of proficiency in making three view and pictorial sketches. Prerequisite: None

#### **MAT 1101—FUNDAMENTALS OF MATHEMATICS**

Practical number theory. Analysis of basic operations; addition, subtraction, multiplication and division. Fractions, decimals, power roots, percentages, ratio and proportion. Plane and solid geometric figures used in industry measurement of surfaces and volumes. Introduction to algebra used in trades. Practice in depth. Prerequisite: None

#### **PLU 1110—PLUMBING PIPEWORK**

This course will introduce students to the tools, fittings, and small equipment used by plumbers. Most of the time will be spent in the shop, equipment used by plumbers. Most of the time will be spent in the shop, where the student can learn how to handle these materials correctly. The student will perform operations such as threading, cutting, and caulking, of the various kinds of pipe used in the trade. Prerequisite: None

### **Second Quarter**

#### **ENG 1102—ENGLISH B**

Development of the student's ability to communicate effectively with other individuals through the medium of good language usage in speaking and writing, to think more clearly, and to reason more forcefully in work problems pertaining to his job. Prerequisite: ENG 1101.

#### **PHY 1102—APPLIED SCIENCE**

The second in a series of two courses of applied physical principles. Topics introduced in this course are heat and thermometry, and principles of force, motion, work, energy, and power. Prerequisite: PHY 1101.

#### **DFT 1115—BLUEPRINT READING: PLUMBING TRADES**

Sketching diagrams and schematics, and interpretation of blueprints applicable to the plumbing trades. Emphasis will be on plumbing plans for domestic and commercial buildings. Piping symbols, schematics, diagrams and notes will be studied in detail. Applicable building and plumbing codes will be used for reference. Prerequisite: DFT 1110.

#### **PLU 1111—DOMESTIC COLD WATER SYSTEMS**

The installation of water distribution systems beginning with the source of supply and including the location of pipes, valves, and pumps in both single-story and multi-story buildings will be studied. Plumbing installations will be made to provide practical applications. Private and public sewage and drainage systems, including their ventilation is a part of this course. Field trips will be taken to study various types of installations. Prerequisite: PLU 1110.

#### **PLU 1113—DOMESTIC HOT WATER SYSTEMS**

The installation of hot water distribution systems beginning with the source of supply and including the location of pipes, valves, pumps, heating devices, and the storage and circulation of hot water for private and public use will be studied. Field trips will be taken to study various types of installations. Prerequisites: PLU 1110, PLU 1111.

### **Third Quarter**

#### **PSY 1101—HUMAN RELATIONS**

A study of basic principles of human behavior. The problems of the individual are studied in relation to society, group membership, and relationships within the work situation. Prerequisite: None

#### **DFT 1116—PLUMBING DRAWINGS: RESIDENTIAL**

A specialized course in drafting for residential plumbing and hydronic heating. Emphasis will be placed on reading of blueprints that are common to the trade; blueprints of mechanical components, assembly drawings, wiring diagrams and schematics, floor plans, plumbing and heating plans, including layout plans, and shop sketches. The student will make

tracings of floor plans and layout plumbing systems. Prerequisites: DFT 1110, DFT 1115.

#### **PLU 1112—INSTALLATION OF PLUMBING FIXTURES: RESIDENTIAL**

The differences in materials and styles of lavatories, bathtubs and sinks, and the many ways that these fixtures can be installed will form the basis of this course. The proper use of traps is included. The student will get actual practice by making installations. Prerequisites: PLU 1111, PLU 1113.

#### **PLU 1100—SOLDERING AND SILVER SOLDERING**

This course will introduce students to the tools, fittings, and small equipment used by plumbers. Most of the time will be spent in the shop, where the student will learn how to handle these inaperials correctly. The student will perform operations such as sweating various sizes of copper tubing and fittings with different grades of solder used in the trade. Also silver soldering copper tubing as used in the trade. Prerequisite: PLU 1111, PLU 1113.

### **Fourth Quarter**

#### **BUS 1103—SMALL BUSINESS OPERATIONS**

An introduction to the business world, problems of small business operation, basic business law, business forms and records, financial problems, orders and inventories, layout of equipment and offices, methods of improving business, and employer-employee relations. Prerequisite: None

#### **PLU 1126—HYDRAULIC SYSTEM PLUMBING**

Plumbing applications in hydraulic systems. Hydraulic principles, circuits, control valves, actuators, pumps, fluids and various accessories that complete hydraulic systems will be studied. Installation and servicing methods of these systems will be undertaken. Prerequisites: PLU 1110, PLU 1100, PHY 1101, PHY 1102.

#### **PLU 1114—COMMERCIAL PIPING (PLUMBING)**

The differences in materials and styles of fixtures, and the many ways that these fixtures can be installed will form the basis of this course. Field trips will be taken to study various types of installations. Prerequisites: PLU 1100, PLU 1110, DFT 1115, PLU 1113, DFT 1116, PLU 1112.

#### **WLD 1141—BASIC WELDING**

Welding demonstrations by the instructor and practice by students in the welding shop. Safe and correct methods of assembling and operating the welding equipment. Practice will be given for surface welding and flame cutting. Emphasis on electric arc and gas welding methods applicable to mechanical repair work. Bronze welding and silver soldering may also be covered. Prerequisite: None

#### **PLU 1118—PLUMBING CODES**

A study of plumbing definitions and the rules and regulations governing installations, repairs, alterations and maintenance of all plumbing and materials. Consideration is given to the study of the rules and regulations governing the installation of storage heaters, storage tanks, and appliances. Regulations governing public water supply, workmanship, licenses, permits and fees. Inspection and test as set forth in the plumbing code.

### **Fifth Quarter**

#### **ECO 1000—APPLIED ECONOMICS**

Designed to help the student understand present-day economic problems. Topics include: production, consumption, exchange and distribution, money and credit, business fluctuations, labor and management relations, and challenges to our system of free enterprise.

#### **MAT 1112—CONSTRUCTION ESTIMATING**

A study of estimating plans and specifications of different buildings for plumbing and heating construction. Actual material take off from plans and specifications and all aburtant information pertaining there too. Pre-requisite: None

#### **DFT 1117—PLUMBING DRAWINGS (COMMERCIAL)**

A study of different types of business and drawing plans for the plumbing and heating for the different types of business such as Offices, Motels, Schools, etc. This will give the student a better understanding of the industry. Prerequisites: DFT 1116, DFT 1115.

## **WLD 1104—BASIS ARC WELDING**

Introduction to the history of oxyacetylene and arc welding, the principles of welding and cutting, nomenclature of the equipment, assembly of unit. The operation of various AC transformers, AC and DC rectifiers, and DC motor generator arc welding units. Welding procedures such as practice of puddling and carrying the puddle, running flat beads, and the cutting of straight lines with the torch. Safety procedures are stressed throughout the program of instruction. Prerequisite: None

### **Sixth Quarter**

#### **MAT 1114—PLUMBER AND FITTER**

Emphasis is placed upon the development of usable skills in the layout, measurements and computations of pipelengths, including fitting allowances, volumes, pressure, capacities, cylinder stretchouts, heatloss, radiator size and estimating the size of piping are subject for various calculations. Prerequisite: MAT 1101.

#### **PLU 1101—WORKING WITH LEAD**

Introduction to the history of lead and its use in plumbing. The student will study the tools required as well as safety precautions in regards to lead wiping, working lead pipe, working with sheet lead and lead burning. This will help the student to understand lead work as applied to plumbing. Prerequisite: None

#### **DFT 1118—PLUMBING DRAWINGS (INDUSTRIAL)**

The student will become familiar with industrial plans and specifications, different plumbing layouts, water treatment and chemical waste, different types of material used for this application. This will give the student a better understanding of the trade. Prerequisites: DFT 1110, DFT 1115, DFT 1116, DFT 1117.

#### **PLU 1125—INDUSTRIAL PIPING**

Piping systems of boilers, turbines, and steam engines especially as they are used in steam power plants, and process piping such as is used in the chemical industries will be the major emphasis of this course. Prerequisites: PLU 1112, WLD 1141, WLD 1104, PLU 1114, MAT 1114, PHY 1102, PLU 1110.

### **Seventh Quarter**

#### **PLU 1120—LOW PRESSURE STEAM SYSTEM**

The student will become acquainted with types of low pressure steam boilers, and the principles of boiler operation. Boiler accessories such as connectors, fittings, and insulation are to be included. Low pressure steam systems, their layout, and component parts will be studied and installed. Equipment used in heat transmission, such as radiators, coils, and connectors will be included. Prerequisites: PLU 1110, PLU 1113, PLU 1100, PLU 1114, WLD 1141, WLD 1104, MAT 1114, PHY 1102.

#### **AHR 1116—OIL BURNER INSTALLATION**

Burner fundamentals, high pressure gun-type burners, pressure regulating valves, nozzles, fans and air control devices, low-pressure atomization burners, rotary burners, vaporization pot-type burners, thermostats, pressure burner controls, vaporizing burner controls. Service and maintenance. Prerequisite: None

#### **PLU 1123—PANEL HEATING AND HOT WATER BOILERS**

The piping and accessory equipment needed to transfer hot water to radiators, heaters, and coils, and the advantages and disadvantages of each to these units will be studied, including apparatus for radiant heating and panel heating. Methods of "Sizing" equipment for various installations will be included. Practical application will be provided in installing this equipment. Prerequisites: PLU 1120, PLU 1111, PLU 1113, PLU 1110, PLU 1126, PLU 1100, MAT 1114.

### **Eighth Quarter**

#### **PLU 1121—HIGH PRESSURE STEAM SYSTEM**

Applications of low pressure steam equipment will be continued. Principles involved in industrial applications of both low-pressure and high-pressure steam equipment. Commercial and industrial blueprints will be studied utilizing low and high pressure equipment. High Pressure boilers and installations of high pressure systems will be emphasized. Prerequisite: PLU 1120.



### ISC 1101—INDUSTRIAL SAFETY

A study of the development of industrial safety; accident occurrence and prevention; analysis of accident causes and costs; basic factors of accident control; safety education and training; accident reporting and records; employer and employee responsibility; safety organizations; first aid; mechanical safeguards; personal protective equipment use; materials handling; fire prevention and protection; safety codes; and accident statistics. Prerequisite: None

### PLU 1131—FUELS AND BURNERS

Fuels and burners used in supplying heat for various types of heating systems coal, oil, natural gas, manufactured gas, liquified petroleum gas, and electricity. Experiments in equipment selecting, installation, adjusting and servicing will be conducted. Prerequisites: PHY 1101, PHY 1102, AHR 1116.

### PLU 1132—CIRCUIT AND CONTROLS

Electric, electronic and pneumatic controls as related to ventilation, refrigeration and air-conditioning systems. Practice in layouts, including symbols and schematic diagrams. Laboratory work in installation of control systems. Test instruments of their use. System adjustments for proper operation. Prerequisites: PHY 1101, PHY 1102.

## SURVEYING

### (Night Program)

This curriculum is designed to give the students knowledge of the fundamentals of surveying. The course covers the legal principles of boundary controls as well as practical surveying.

Plane, land, topographical, route, building and road construction surveying are covered in the course. Mapping, drafting, blueprint reading and applied mathematics are included.

This curriculum is recognized by the North Carolina State Board of Registration for Professional Engineers and Land Surveyors. Successful completion of the program is accepted as one year's credit toward the statutory experience requirement for registration as a Land Surveyor.

### Occupational Opportunities

With the tremendous growth of road construction, real estate business and industry, employment is no problem. Opportunities are found with state and federal agencies, private contractors, engineering firms, industries and private land surveyors.

This class meets two nights per week—plus Saturday field work.

First Quarter	Class	Lab	Field	Credit
DFT 1121	2	2	0	3
MAT 1101	4	0	0	4
				<hr/> 7

Second Quarter	Class	Lab	Field	Credit
MAT 101	4	0	0	4
CIV 101	1	3	4	3 ½
				<hr/> 7 ½

Third Quarter	Class	Lab	Field	Credit
MAT 102	4	0	0	4
CIV 102	1	3	4	3 ½
				<hr/> 7 ½

#### **Fouth Quarter**

CIV 103	1	3	4	3 ½
CIV 100	2	0	0	2
ECO 1000 Applied Economics	2	0	0	2
				<hr/> 7 ½

## **SURVEYING**

### **Course Descriptions by Quarters**

#### **First Quarter**

##### **DFT 1121—INTRODUCTION TO SURVEYING DRAFTING**

An introduction to drafting and the study of drafting practices. Instruction is given in the selection, use and care of instruments, single stroke lettering, applied geometry, freehand sketching consisting of orthographic and pictorial drawings. Orthographic projection, reading and instrument drawing of principal views, single auxiliary views (primary), and double (oblique) auxiliary views will be emphasized. Dimensioning and note practices will be studied with reference to the American Standards Association practices. Methods of reproducing drawings will be included at the appropriate time.

##### **MAT 1101—FUNDAMENTALS OF MATHEMATICS**

Practical number theory. Analysis of basic operations: addition, subtraction, multiplication and division. Fractions, decimals, powers and roots, percentages, ratio and proportion. Plane and solid geometry; measurement of surfaces and volumes. Introduction to algebra. Practice in depth.

#### **Second Quarter**

##### **MAT 101—TECHNICAL MATHEMATICS**

The real number systems is developed as an extension of natural numbers. Number systems of various bases are introduced. Fundamental algebraic operations, the rectangular coordinate system, as well as fundamental trigonometric concepts and operations are introduced. The application of these principles to practical problems is stressed.

##### **CIV 101—SURVEYING I**

Care and use of instruments, theory and practice of plane surveying including taping, differential and profile leveling, transit, stadia, and transit-tape surveys.

#### **Third Quarter**

##### **MAT 102—TECHNICAL MATHEMATICS**

A continuation of MAT 101. Advanced algebraic and trigonometric topics including quadratics, logarithms, determinants, progressions, the binomial expansion, complex numbers, solutions of oblique triangles and graphs of the trigonometric functions are studied in depth. Prerequisite: MAT 101.

##### **CIV 102—SURVEYING II**

Triangulation of ordinary precision, use of plane table, calculation of areas of land, land surveying, topographic surveys and mapping.

#### **Fourth Quarter**

##### **CIV 103—SURVEYING III**

Route surveys by ground and aerial methods; simple, compound, reverse parabolic and spiral curves; geometric design of highways, highway surveys and plans including mass diagrams.

##### **CIV 100—BOUNDARY CONTROL**

The course covers the legal principles of boundary control to acquaint the student with the correct interpretations of deed description.

##### **ECO 1000—APPLIED ECONOMICS**

Designed to help the student understand present-day economic problems. Topics include: production, consumption, exchange and distribution, money and credit, business fluctuations, labor and management relations, and challenges to our system of free enterprise.

# ADULT EDUCATION AND COMMUNITY SERVICES

## OCCUPATIONAL EXTENSION

## TRAINING FOR NEW AND EXPANDING INDUSTRIES

## GENERAL ADULT EXTENSION

### ADULT EDUCATION

#### GENERAL INFORMATION

Education is a process that continues throughout an individual's life. It is the Institute's aim to offer individuals the opportunity to develop their fullest potential in whatever areas of vocation and cultural activity they desire. In this way, the Institute helps people to meet the demand of a rapidly changing technological economy and a complex democratic society which requires the making of intelligent choices if we are to prepare what is valuable and important and change what needs changing in the culture of our society.

The Institute, through its Extension Office, offers to any adult, regardless of his educational background, an opportunity to continue learning in a wide variety of fields. Classes can be organized, either on or off campus, to teach practically any subject that is vocationally or culturally upgrading, whenever and wherever there is a need expressed by a sufficient number of interested people in any community in the primary service area of Jackson, Macon and Swain counties.

Such extension courses can be classed in two broad categories; Occupational Extension and General Adult Extension.

#### **Admission**

The admission procedure is the same for both Occupational Extension and General Adult Extension. Any adult eighteen years of age or older may enroll in an extension class. In special cases, out-of-school youths may also be permitted to enroll at age sixteen.

#### **Registration**

Persons interested in taking an extension class in either an area described below or some other subject of interest to them, should contact the Extension Office, and an effort will be made to organize a class. Registration for classes is held either at the Southwestern Tech campus or at designated places in the service area where a class is expected to be offered. Following registration, classes will begin as soon as an instructor is secured, if one has not already been found to meet the needs of the students enrolled. Every effort will be made to avoid conflicts and to arrange courses for the convenience of students. Students who complete registration will be notified when classes will begin.

#### **Costs**

No tuition charges are made for enrollment in extension classes. In many cases, instructional materials are provided free; however, in some classes, especially in the area of arts and crafts, students may be expected to pay for the materials they use and keep.

#### **Duration of Classes**

The length of an extension class is determined by the needs of the students and the content of the course. Most courses last from 18 to 144 hours and generally meet one or two times a week for sessions of 2 to 3 hours. The majority of classes are held in the evening, although daytime classes can be arranged upon demand.

### Requirements for Certificates:

Certificates are awarded on the basis of the following:

1. Official enrollment
2. Class participation, discussions, and projects
3. Regular attendance (Certificates cannot be awarded to those whose attendance is less than eighty per cent of the clock hours assigned to each course).

## OCCUPATIONAL EXTENSION

An occupational extension course is one which is a part-time course and does not count toward a diploma or degree, but for which a certificate of completion may be given. Classes are designed to meet the general or specific training or retraining needs of groups or private individuals or employees in businesses, industry, governmental agencies, and other public institutions. Most occupational extension offerings are flexible in that the length and content can be tailored to meet specific groups needs. Classes are initiated as such needs are indicated by surveys, interviews, personal requests, and enrollment in existing or proposed programs. A partial listing of classes offered in the last year includes:

### Supervisory Development Training Program

In an effort to meet the needs of North Carolina industry, a Supervisory Development Training program has been developed by the Department of Community Colleges.

The Supervisory Development Training Program is designed to train persons interested in becoming supervisors and to provide instruction for supervisors at various levels of management as preparation for advancement.

Course No.	Course Title	Classroom Hours
SDT 1	Principles of Supervision	44-46
SDT 2	Job Relations Training	10
SDT 3	Science of Human Relations	18-20
SDT 4	Art of Motivating People	22
SDT 5	Economics in Business and Industry	22
SDT 6	Effective Communications	22
SDT 7	Effective Writing	22
SDT 8	Effective Speaking	15
SDT 9	Speed Reading	20
SDT 10	Work Measurement	22
SDT 11	Job Methods	10
SDT 12	Conference Leadership Training	10
SDT 13	Instructor Training	15
SDT 14	Creative Thinking	22
SDT 15	Industrial Safety and Accident Prevention	22
SDT 16	Industrial First Aid	10
SDT 17	The Supervisor in N. C.	10
SDT 18	Job Analysis Training	12
SDT 19	Management Primer	44
SDT 20	Cost Accounting for Supervisors	14
SDT 21	Supervision in Hospitals	40

### Fire Service Training

A variety of courses are offered in cooperation with individual fire departments in the service area. Specific units of study are designed to increase the fire fighter's technical knowledge and improve his skills in fire-ground operation and may be offered in any order, according to the needs of each fire department. It is suggested, however, that a final summary course in firefighting procedures conclude any protracted program in which all of the units are studied. For a more detailed explanation of offerings, contact the Extension Office.



### **Law Enforcement Training**

A training program similar to that offered to fire departments is available to law enforcement officers in the area. The program of study was developed by the Institute of Government at Chapel Hill. A partial listing of courses available includes:

- Elements of Offenses
- Law of Arrest and Search and Seizure
- Motor Vehicle Law
- Court Structure and Procedure
- Liquor Law
- Law Enforcement Procedures
- General Criminal Investigation

Any interested person should contact the extension office for more specific information.

### **TRAINING FOR NEW AND EXPANDING INDUSTRIES**

"One of the basic objectives of Southwestern Technical Institute is to stimulate the creation of more challenging and rewarding jobs for the people of our area by providing a customized training service to new and expanding industries. Subject to only minimal limitation, this institution, in cooperation with the Industrial Services Division of the State Department of Community Colleges, will design and administer a special program for training the production manpower required by any new or expanding industry creating new job opportunities in North Carolina."

This program includes the following services:

1. Consultation in determining job description; defining areas of training; and in prescribing appropriate course outlines, training schedules, and materials.
2. Selecting and training of instructors. These instructors may be recruited from the company and from outside sources.
3. Payment of instructors' wages for the duration of the training program.
4. Provision of suitable space for a temporary training facility prior to the completion of the new plant, should such temporary space be required. This may be space with Southwestern Technical Institute or leased space in the community.
5. Assumption of installation costs of equipment in the temporary training facility.
6. Payment for one-half the cost of nonsalvageable materials expended in the training program.

"The purpose of this service is to help a new or expanding industry meet its immediate manpower needs and to encourage each industry to develop a long-range training program of its own to satisfy its continuing replacement and retraining needs."

### **GENERAL ADULT EXTENSION**

The Institute offers a wide range of programs which are designed to provide individuals with an opportunity to attain skills and knowledge for personal use and general education. Some courses are of an academic nature while others are rational or cultural. The main goal of the general extension program is to help adults obtain a fuller life through development of their creative talents and more fruitful use of leisure time and through expanding their opportunities for greater economic well-being by

improving their academic skills so that they may qualify for job promotions or more advanced vocational training. Programs offered are as follows:

### **Community Service Extension Courses**

Southwestern Technical Institute offers a wide variety of courses, depending upon group interests as expressed by surveys, and personal requests, which contribute to the cultural enrichment and improvement of daily living, or vocational interest of participants. Examples of these classes which were offered in the past year are:

- Consumer Education
- Creative Arts, including arts and crafts
- Personal and Home Safety
- House Working
- Income Tax
- Real Estate
- Driver Education

### **Adult Basic Education**

The Adult Basic Education program provides basic education to adults age 18 or over whose educational accomplishment is below the twelfth grade level. Originally authorized under the Economic Opportunity Act of 1964, the program is now administered by the U. S. Office of Education. In North Carolina, the Department of Community Colleges has been designated as the agency in charge of the program.

Adult Basic Education classes are organized at several locations throughout the Southwestern Tech service area to provide free instruction on various levels from beginning reading, writing, and arithmetic, to more advanced study of English grammar and usage, mathematics, social studies, and science.

The materials used and the teaching provided are designed to meet adult interests. For example, family budgeting and preparation of income tax forms may provide practice in mathematics or social studies discussions may center around the adult's role as a citizen.

The program lays the groundwork for many individuals to take the high school equivalency examinations described below. Students enrolled in the classes benefit from group discussions, teacher explanations, workbook exercises, and periodic evaluations to determine progress.

## **LEARNING LABORATORY**

The Learning Laboratory offers an educational opportunity to all persons 18 years of age or older. This age limit may be changed to meet special needs. The Learning Laboratory offers study in a variety of materials, which range from first grade level to college level. This enables the Learning Lab to offer help to a wider range of people, regardless of their educational level.

The Learning Laboratory has been designed to serve the following groups:

1. Adults who would like to earn a high school equivalency certificate. The Learning Lab is an ideal situation for persons to study and prepare to take the G.E.D. tests.
2. Prospective students for Southwestern Technical Institute who need to brush-up on certain subjects before entering. Full or part time study programs are available.
3. Prospective college students who would like to increase their educational abilities before entering school.

4. Regular curriculum students at Southwestern Technical Institute who need or desire supplementary work to improve their performance in their regular course work.

5. Adults having a special interest in a particular subject, such as a foreign language, blueprint reading, calculus, or chess.

Supervision and help are provided for the students by the Learning Lab Coordinator who interviews students, helps them determine their goals, and sets up a program of study to help them achieve their goals. The coordinator also helps the students to see their own progress as they move to gain their goal.

Southwestern Technical Institute maintains two Learning Laboratories. One is located at Bryson City in Mobile Unit No. 2 at the Swain County High School. The other lab is located in Franklin in Room 216 of the Franklin High School. In addition to these labs, two mini labs are available as needed in the service area of the Institute.

The schedule for the labs are as follows:

Bryson City Monday-Thursday 4:30-9:00 p.m.

Franklin Monday-Thursday 4:30-9:00 p.m.

A student can enroll in the Learning Lab at any time without waiting for a new quarter to begin. The Labs are open twelve months of the year. All studies in the Learning Laboratories are free of charge.

#### **General Education Development Tests**

In July, 1969, Southwestern Technical Institute became an official General Educational Development Testing Center. These tests cover five broad areas:

1. English Expression
2. Literature
3. Mathematics
4. Social Studies
5. Natural Science

Persons receiving a total passing score of 225 points with no single test score below 35 are awarded a High School Equivalency Certificate by the North Carolina Department of Public Instruction. This certificate is generally accepted on the same basis as a high school diploma for employment, job promotion and higher education.

Preparation: A person wishing to take the GED tests should come to the institute for an initial interview and preliminary counseling. If it appears that the individual is not yet fully ready to take the tests, he can select one of two ways to complete his preparation: The Adult Basic Education program, or the Learning Lab; either of which will help him acquire the skills necessary for success on the tests.

Application requirements: In order to take the GED tests, a person must:

1. Be at least 18 years of age
2. Be a resident of North Carolina
3. File an application which is available at the institute or from his county superintendent of schools
4. Have a valid vocational, educational, or other purpose in applying
5. Pay a fee of \$3.00 at the time of application

In the event that any single test score or the total score is unsatisfactory, a retest may be taken after six (6) months of further study. There is a charge of \$1.00 for each section of the tests taken on a retest.

At the time of application, a testing date will be set up. Every effort will be made to arrange a time which will be at the convenience of the applicant so that he will not have to take time off from work or other responsibilities.



**SOUTHWESTERN TECHNICAL INSTITUTE**  
**POST OFFICE BOX 95, SYLVA, NORTH CAROLINA 28779**  
**APPLICATION FOR ADMISSION (Please Type or Print in Ink)**

NAME: \_\_\_\_\_  
 Last First Middle Telephone Age Sex S.S. Number

Mailing Address: \_\_\_\_\_

Street or Route City State Zip Code Height Weight  
 ( ) Single; ( ) Married; ( ) Divorced; ( ) Widowed Date of

Birth \_\_\_\_\_ Month \_\_\_\_\_ Day \_\_\_\_\_ Year \_\_\_\_\_

Circle Highest School Grade Completed: Place of Birth \_\_\_\_\_

Grade School High School Trade College Type of Diploma

1 2 3 4 5 6 7 8 1 2 3 4 1 2 3 1 2 3 4 Received: \_\_\_\_\_

High School: Name \_\_\_\_\_ 19\_\_\_\_/19\_\_\_\_\_

Address \_\_\_\_\_ From/To (Reason for Leaving)

Trade or Name \_\_\_\_\_ 19\_\_\_\_/19\_\_\_\_\_

College: Address \_\_\_\_\_ From/To (Reason for Leaving)

Parent's or Name \_\_\_\_\_

Spouse: Address \_\_\_\_\_ Relation Telephone No. \_\_\_\_\_

Military Service: Draft Status \_\_\_\_\_ Select. Serv. No. \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

Local Board: Number \_\_\_\_\_ Address \_\_\_\_\_

Veterans: Branch of Service \_\_\_\_\_ Type of Discharge \_\_\_\_\_

Length of Service \_\_\_\_\_ Date of Discharge \_\_\_\_\_

(Years-Months) (Month-Day-Year)

Describe any Physical Defect \_\_\_\_\_

Will you need any financial assistance to attend school? \_\_\_\_\_ If yes,

how much per year? \_\_\_\_\_ Will you need housing? \_\_\_\_\_ If yes,

what type? ( ) Room ( ) House ( ) Apartment

Have you ever been convicted of any crime other than minor traffic

violations? \_\_\_\_\_

Check the type of training you want: ( ) DAY PROGRAM ( ) NIGHT

PROGRAM

( ) Accounting ( ) Cosmetology

( ) Business Administration ( ) Electronic Servicing

( ) Commercial Art and ( ) Environmental Technology

Advertising Design ( ) Practical Nurse Education

( ) Secretarial Science ( ) Surveying

( ) Recreation Technology ( ) Plumbing and Pipefitting

( ) Automotive Mechanics ( ) Associate Degree in General

( ) Early Childhood Specialist Education

( ) General Masonry ( ) Developmental Studies

( ) Child Care Worker

When do you wish to start? Fall: \_\_\_\_\_; Winter: \_\_\_\_\_; Spring: \_\_\_\_\_;

Summer: \_\_\_\_\_: 19\_\_\_\_\_

References: List three persons, other than members of your family, who

know your character. (Law Enforcement applicants must give law en-

forcement officers as references.)

Name Address Telephone Occupation

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

( ) Check if you have requested your school to send Southwestern Tech-

nical Institute a transcript of your school record. If you have not, you

should do so. Have you previously applied for admission to Southwestern

Technical Institute? \_\_\_\_\_

TO THE APPICANT: A tuition deposit of \$5.00 will be required when a

curriculum student's application for admission is approved; such deposit

shall be credited to the student's tuition when the student enrolls, and

refund for such shall not be made unless the course fails to materialize.

Signature in Full \_\_\_\_\_ Date \_\_\_\_\_





SOUTHWESTERN TECHNICAL INSTITUTE  
P. O. Box 95  
Sylva, N. C. 28779

To

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